EFFECT OF PASSENGER PERCEPTION OF IN-FLIGHT SAFETY AND SECURITY PROCEDURES ON THEIR SATISFACTION: THE MODERATING ROLE OF SAFETY KNOWLEDGE

Phenphimol Seriwatana*

Abstract

The objective of this pilot study is to examine the effect of passenger perception of flight attendants' safety and security duties during normal operation and how the moderating role of passenger's knowledge of safety protocols and purposes affects passenger satisfaction.. While safety and security is a basic human need, safety measures might not be followed in circumstances where the reasons for the safety measures are unclear. This study's hypotheses were tested using 40 samples, which were 40 residents of Bangkok. The result from the regression analysis suggests that the level of passenger's safety knowledge significantly moderated the relationship between passenger perception of in-flight safety and security procedures and their satisfaction. These findings suggest some implications regarding the requirement of in-flight safety and security procedures for the airlines and government.

Keywords: in-flight safety and security procedures, passenger perception, passenger satisfaction, safety knowledge, flight attendant/cabin crew, unexpected behavior

1. INTRODUCTION

Safety is one of the basic human physiological needs (Maslow, 1943). Helmreich and Merritt (1998) proposed that "Safety is a universal value. In every culture, members value and strive to increase it. Safety, however, is not a binary condition defined by safe or unsafe practice, but a continuum running from increased to decreased probability of accidents" (p. 142). Various airline safety procedures are carefully designed for many purposes aiming especially at human's safety and these procedures should therefore satisfy passengers. However, Burdett and Grant (2010) reported that most of passengers do not follow or ignore the procedures (see also Corbett & McLean, 2010). From onboard observation, it was also found that some passengers feel annoyed and dissatisfied when

*Miss Phenphimol Seriwatana obtains her Master degree in Management from Ramkamhaeng University, Thailand. Currently, she is working as a Lecturer in Department of Management Science at Kasetsart University. She is a Ph.D. candidate in the International College of the National Institute of Development Administration, Thailand.

they are informed to follow the procedures. These behaviors normally arise when their participation is required in the procedures. In-flight safety and security procedures, which are performed by flight attendants on board, fall into this scope as they need passengers' full cooperation. Since this procedure encountered by passengers is in prepared and preventive aspects, the reasons for these procedures might be beyond passengers' safety awareness. Moreover, most procedures cause passengers discomfort and therefore could affect their satisfaction, especially if the procedures are performed during non-emergency circumstances.

Customer (passenger) satisfaction is important to business. If customers are satisfied, they are more likely to purchase more goods or services and customer satisfaction is therefore a primary business goal. However, if the airline safety requirements are met and strictly performed but passengers are dissatisfied as a result, safety requirements could be compromised in order to satisfy passengers. This creates danger in the aviation industry, and this situation could lead to disasters. The aim of this study is to examine the relationship between flight attendant safety and security duties during normal operation and passenger satisfaction. Since we want to measure passengers' perception of safety during normal operation, this study will only cover the aspect of preventive and prepared procedures, which passengers are able to observe and with which they must cooperate. Findings from this study might prompt the airline industry to provide passengers with more knowledge on in-flight safety and security so that passenger satisfaction is met while maintaining standard safety and security procedures.

2. LITERATURE REVIEW

2.1 Airline Business

Air travel is a large and growing industry. It facilitates economic growth, world trade, international investment, and tourism. The airline industry is therefore central to globalization (Hartono, 2011).Data from the International Air Transport Association (2013) shows that airlines expect a 31% increase in passenger (3.91 billion passengers) between 2012 and 2017. The International Civil Aviation Organization (ICAO) safety report (2014) showed a positive trend for air transportation safety. The year-over-year accident statistics indicate a reduction in the overall number of accidents as well as the accident rate. The number of accidents in 2013 decreased by 10% from 2012. In addition, the 2013 global accident rate involving scheduled commercial operations decreased by 13%, from 2012. The 173 fatalities in 2013 represent the fewest number of fatalities in commercial scheduled air transport since the year 2000. The number of fatalities in 2013 represents a decrease of 53% from 2012 and is 65% below the average number of fatalities over the previous five year period. These statistics would not have been achieved without cooperation from many parties, such as world aviation organizations, governments, and especially the airlines. Safety is the airlines' first priority and has become embedded in every aspect of the airlines' culture.

2.2 The Important of Customer Satisfaction

In his book, *Satisfaction: A Behavioral Perspective on the Consumer* (2010), Oliver stated that

"Satisfaction is the consumer's fulfillment response. It is a judgment that a product/ service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including a level of under- or over-fulfillment. Here, pleasurable implies that fulfillment gives or increases pleasure or reduces pain, as when a problem in life is solved" (p. 8).

Meyer and Mostert (2011) described how customer awareness of alternative offerings in the marketplace is increasing. Hence, growing expectations and demands affect service delivery. Particularly, players in the airline business are easily susceptible to competitors' offerings. Airlines should therefore offer high-service levels to ensure that passenger satisfaction is met and long-term relationships are built. Long-term relationships are related to financial and social benefits for both airlines and customers. Meyer and Mostert's research found that dissatisfied customers will not tend to form long-term relationships with providers. Loyal and satisfied customers are company assets that do not require costs to acquire, retain, and develop, but that generate revenue nonetheless. Companies which truly achieve high customer satisfaction also enjoy superb economic returns (Anderson, Fornell, & Lehmann, 1994). Park, Roberton, and Wu (2006) also noted that customer satisfaction is a key factor of passengers' behavioral intentions and hence important to the long-term survival of airlines. Suki (2014) has found that there is a consistent relationship between customer satisfaction with airline service quality and word-of-mouth recommendations, which affect passengers' decision-making processes (Park et al., 2004). Ekenci and Dawes (2008) said that in contrast to product manufacturing, service delivery always involves employees interacting face-to-face with consumers. Thus, service employees, particularly the frontline employee's interacting with consumers, are the major key for developing a strong brand in service companies. As Ariffin and Ehsaneh (2013) stated, hospitality organizations such as airlines have to discover the way to surprise their passengers during "moments of truth" while at the same time ensuring passengers' safety and security when receiving service.

2.3 Flight Attendant Performance and Passenger Satisfaction

This research focuses on passenger perception of flight attendant safety and security duties during normal operation and how this perception might affect passenger satisfaction.

By law, flight attendants are required on board for passengers' safety and security. They provide personal services to ensure passengers' safety and comfort. To keep passengers safe and ensure that everyone follows security regulations is the primary job of flight attendants. They also try to make passengers comfortable and enjoy their flight (US Bureau of Labor Statistics, 2014). Flight attendants are the airline's ambassadors to the customers. They make an immediate and lasting positive or negative impression (Air Canada, 2014). Delta Airlines (2014) states that flight attendants are truly the face of airlines and must be passionate to maximize each customer's experience. Consequently, it's reasonable to presume that frontline service employees' attitudes, behaviors, and competencies are significant to determine consumer satisfaction (Dawes & Ekinci, 2009). Flight attendants' in-flight duties are plenty; these duties can, however, be grouped into

three major roles which are safety, security, and service. (Damo, Boyette, & Gibbs, 2013).

2.3.1 Passenger perception of in-flight safety and security procedure

Oxford Learner's Dictionaries define safety as "the state of being safe and protected from danger or harm" and security as "the activities involved in protecting a country, building or person against attack, danger, etc." International Air Transport Association (IATA) states that

"Cabin safety deals with all activities that a cabin crew must accomplish to maintain safety in the cabin. These activities contribute to safe, effective, and efficient aircraft operations in normal, abnormal, and emergency situations. Cabin safety is a critical component of an airline's safety management program, which includes proactive data collection and the ensuing prevention activities regarding cabin design and operation, equipment, procedures, crew training, human performance, and passenger management" (p.1).

Existing safety and security procedures were amended and further emphasized after 9/11. Moreover, new security procedures were also developed and implemented. Flight attendant in-flight security duties are primarily to ensure that no foreign objects are on board and that no activities that could disrupt the normal flight operation occur (Damos et al., 2013).

Airlines commit to improve customer service quality with the hope of consolidating their market shares and enhancing profitability. Service quality is not only about the tangible attributes but also about the intangible attritubes such as safety and comfort (Tsaur et al, 2002). As stated in Damo, et al. (2013), flight attendant in-flight safety duties are to ensure that nobody is injured during flight. From airline surveys, the safety record of the airlines is an overriding factor (Oyewole, Sankaran, & Choudhury, 2007). Gilbert and Wong's (2003) research showed that 'assurance' is the most important service aspect that passengers rank consistently. The data show that passengers are concerned about safety and security. Chang and Yang (2011) also stated that more instructions about the use of emergency equipment are required in passenger safety education. Perceived safety is one of the key drivers that can explain the degree of overall customer satisfaction. (Ringle et al., 2011).

H1: There is a positive relationship between passenger perception of in-flight safety and security procedures and passenger satisfaction.

2.3.2 Safety Knowledge

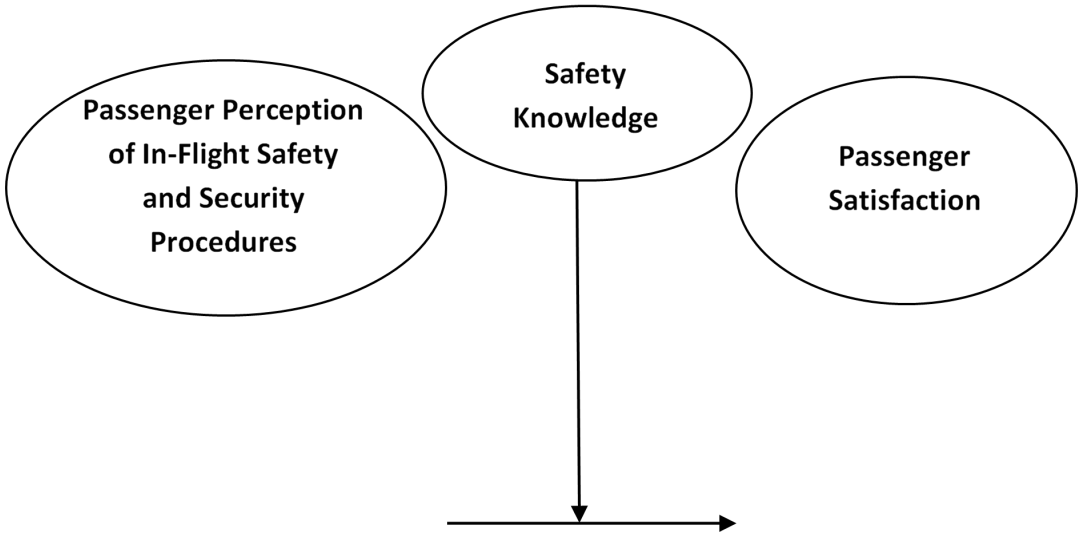
Passengers strongly believe that flight safety education to the general public is necessary. Hence, they believe that government has to do more to develop safety awareness and education for passengers. Aviation safety education aims primarily to provide accurate cabin safety knowledge to airline passengers, develop positive passenger attitudes, and properly shape passenger behavior when there is an emergency. In contrast to other forms of mass transportation, aviation safety education is commonly provided to passengers, but not to all members in the general public, and only before and during flights. Many aircraft accident cases reveal that more flight safety education for airline passengers is needed. Their research showed that "aviation safety education positively affects airline passenger cabin safety

knowledge, attitude, and behavior" (p. 1337). They also found that an increase in cabin safety knowledge and a positive attitude toward cabin safety positively affected airline passenger behavior (Chang & Liao, 2008; 2009).

As stated in Edward (1990), both the U.S. Federal Aviation Administration and the airline industry agree that the emergency action briefing should not urge passenger anxiety or inspire irrational passenger behavior. Passengers are relatively passive on emergency procedures while flight attendants implement procedures necessary to assure that flights continue safely. Obviously, airlines do not intend to draw excessive attention on the possibility of what are, in fact, extremely rare events. Flight attendants are trained to make the flight relaxed and comfortable. Passengers, therefore, resist listening to oral safety briefings and studying safety briefing cards. Preparing passengers in advance to deal with danger and thus reduce the stress caused by emergencies is the main aim of passenger education. An additional advantage of passenger preparation is that it makes passengers less likely to go against the rules when they know the reasons for the rules. It is thus expected that people who have more safety knowledge will have a more satisfying perception of in-flight safety and security procedures.

H2: Safety knowledge will positively moderate the relationship between passenger perception of in-flight safety and security procedures and passenger satisfaction.

Conceptual Model



3. METHODOLOGY

3.1 Sample and Data Collection

Samples for this pilot study consist of residents of Bangkok, Thailand who travel by air. The convenience sampling was used. The study applies a quantitative method, based on the development of a structured self-administered questionnaire, in order to assess the conceptual model and test the proposed hypotheses. A total of 200 questionnaires were distributed and 40 were completed and usable for further data analysis. The valid response rate was thus 20 percent. The respondents' demographics purposes of travel, and frequency of flying are reported in Table 1.

Table 1: Descriptive statistics of the respondents

Demographic Factors	Descriptive Statistic
Gender	Male: 14 (35%) Female: 26 (65%)
Age	Mean: 38.55 years Standard deviation: 8.114
Marital Status	Single: 25 (62.5%) Married: 15(37.5%)
Race	Asian: 36 (90%) Non-Asian: 4 (10%)
Education Level	Below Bachelors' degree: 1 (2.5%) Bachelors' degree: 12 (30%) Master's degree: 25 (62.5%) Doctoral degree: 2 (5%)
Purpose of Travel	Business: 5 (12.5%) Vacation: 35 (87.5%)
Frequency of flying *(time(s) per year)*	1 time: 7 (17.5%) 2 times: 6 (15%) 3 times: 7 (17.5%) 4 times: 6 (15%) 5 times: 2 (5%) More than 5 times: 12 (30%)

3.2 Measures

The main independent variable, passenger perception of in-flight safety and security, is measured by asking the respondents to choose the answer that best corresponds with their perception level on how strictly the airlines perform in-flight safety and security procedures. The scale consists of four items using a five-point Likert-scale (from 1 = very little to 5 = very much).

The main dependent variable, passenger satisfaction, is measured by asking the respondents to choose the answer that best corresponds with their level of agreement. The scale consists of five items using a five-point Likert-scale (from 1 = strongly disagree to 5 = strongly agree).

The moderating variable, safety knowledge, was measured by asking the respondents to choose the answers that best correspond with their safety knowledge. The scale consist of four items using a five-point Likert scale (from 1 = strongly disagree to 5 = strongly agree).

Apart from the main independent variable, general demographic questions were included. Gender is measured as a dummy variable (male = 0; female = 1). Age is measured in years. Marital status is measured as a dummy variable (single = 0; married = 1). Nationality is measure as a dummy variable (Non-Asian = 0; Asian = 1). Educational level is measured using an ordinal scale (below bachelor's degree = 1; bachelor's degree = 2; master's degree = 3; doctoral degree = 4). Purpose of travel is measured as a dummy variable (business = 0; vacation = 1). Frequency of flying are measured using an ordinal scale (1 time = 1; 2 times = 2; 3 times = 3; 4 times = 4; 5 times = 5; more than 5 times = 6).

3.3 Estimating Technique

The Ordinary Least Square (OLS) regression was used to analyze the data since it allows researchers to estimate the linear relationships between independent and dependent variables by minimizing the sum of the squares in the prediction errors and it can identify the strengths of the relationships between variables. The analysis was performed using the computer program Statistical Package for Social Sciences (SPSS), version 17.0. Various statistical tools and techniques were used to analyze the data. Descriptive analysis, including calculating means and standard deviations, was performed.

4. RESULTS

Several steps need to be conducted before performing the regression analysis. First, validity checks for the passenger perception of in-flight safety and security procedures, passenger satisfaction, and safety knowledge were performed. The convergent validity is tested using the Exploratory Factor Analysis (EFA). The results show a Kaiser-Meyer-Olkin (KMO) value of 0.606, which exceeds the recommended threshold value of 0.5, indicating sampling adequacy (Hair et al, 2009). Principal component factor analysis with Varimax rotation was also employed. The results show (see table 2) that the current data have good convergent validity. Next, the reliability analyses of concepts that are measured using multiple item scales were evaluated by using Cronbach's alphas coefficient. The results (see table 2) show that two of these concepts exceed the value of 0.7, which shows good internal consistency, and

one exceeds 0.6, which is acceptable (Nunnally, 1978).This indicates that each concept has sufficient construct reliability. After that, a summated scale was computed from the average score of each multiple item scale that belongs to the same concept.

Bivariate correlations among variables were analyzed using Pearson Correlation Coefficients. In order to estimate the relationships between variables, a correlation analysis was performed and the results are shown in table 3.

Table 2: Validity and Reliability Analysis Results

	Component			Cronbach's Alphas (α)
	1	2	3	
Passenger perception of in-flight safety and security procedures				**0.665**
Cabin crews check the boarding pass at the aircraft door			0.852	
Cabin crews brief passengers who are sitting in the emergency exit rows			0.666	
Cabin crews make an announcement requesting passengers to be seated and fasten seat belts when there is turbulence			0.617	
Cabin crews are present in the cabin during the flight			0.588	
Passenger satisfaction				**0.846**
I am happy with the flight	0.882			
I am satisfied overall with the flight	0.924			
This flight disappointed me	0.751			
I enjoyed this flight	0.730			
This flight met my expectations	0.591			
Safety knowledge				**0.799**
Safety procedures can ease my concerns about safety during air travel		0.774		
I agree that safety procedures are rigidly required because any unexpected situations can happen during air travel		0.810		
I agree that safety procedures are rigidly required because they can make people safe during air travel		0.604		
Safety procedures help me to prepare for any unexpected situations during air travel		0.720		
Variance Explained (%)	25.091	21.238	16.920	

Total variance explained = 63.249%; Bartlett test: $\chi 2 = 246.557$, df= 78, p = .0001

Table 3: Correlation among variables

	2	3	4	5	6	7	8
1. Passenger Satisfaction	.256	.401*	.505**	.315*	.577**	.544**	.355*
2. Passenger Perception	1	.415**	.045	.037	.227	.183	.155
3. Safety Knowledge		1	.411**	.299	.102	.613**	.454**
4. Check-in Process			1	.469**	.418**	.744**	.429**
5. Baggage Allowance				1	.265	.596**	.460**
6. Baggage Service					1	.443**	.347*
7. In-flight Service						1	.650**
8. Food on Board							1

Note: * p < 0.05 level, ** p < 0.5, *** p < 0.001

Table 4: Regression Analysis Results

Variables	(1)	(2)
Passenger perception of in-flight safety and security procedures	0.125	-5.023**
Safety knowledge	0.425*	-5.203**
Passenger perception interaction with safety knowledge		1.273**
Constant	1.492	24.119**
R-Square	0.171	0.355
No. of observations	40	40

*Notes: Unstandardized beta coefficients are reported, ** p < 0.01, * p < 0.05*

Table 4 shows the results from the OLS regression analysis. The first column reports the result: the relationship between these two variables is positive but not statistically significant ($\beta = 0.125$, $p = 0.515$). Hence, hypothesis 1 is not supported. Hypothesis 2, with the interaction term shown in second column, predicted that the positive relationship between passenger perception of in-flight safety and security procedures and passenger satisfaction will be stronger for passengers who have more safety knowledge. The result indicates that the moderating effect of safety knowledge is positive and statistically significant ($\beta = 1.273$, $p = 0.003$). Therefore, hypothesis 2 is supported. In addition, with this moderating effect, the relationship between passenger perception of in-flight safety and security procedures and passenger satisfaction becomes negative and statistically significant ($\beta = -5.023$, $p = 0.004$). The regression model can explain about 35.5% of passenger satisfaction.

Figure 1 shows the data plot between passenger perception of in-flight safety and security procedures and passenger satisfaction. For the group of passengers with less knowledge (figure 1.1), the slope coefficients are significantly negative. In contrast, for the groups of passengers with more knowledge (figure 1.2), the slope coefficients are significantly positive. In order to divide the level of knowledge, the total average score (4.24) of safety knowledge is calculated and used as the criteria to separate passengers. Passengers with individual average scores greater than or equal to 4.24 fall into the group classified as having more safety knowledge, while the rest fall into the group classified as having less safety knowledge.

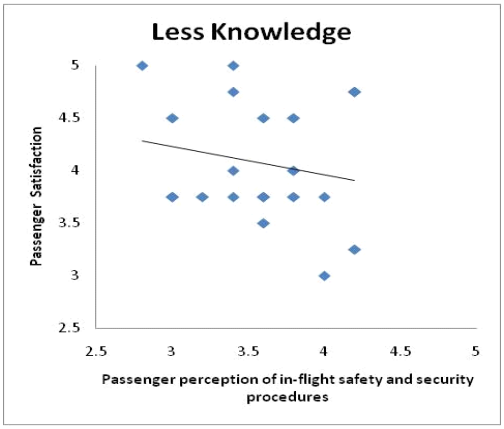


Figure 1.1

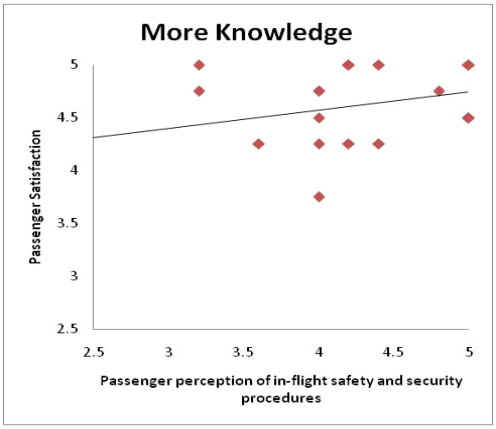


Figure 1.2

Figure 1: Linear plots between passenger perception of in-flight safety and security procedures and passenger satisfaction

5. DISCUSSION AND CONCLUSION

5.1 General Discussion

This research's objective is to investigate the relationship between passenger satisfaction and passenger perception of in-flight safety and security procedures during normal operation. Regression analysis from moderating effect analysis demonstrates significant relationships. The author found new evidence that the more the passengers facing in-flight safety and security procedures on board, the less the level of their satisfaction. The result corresponds to the author's observations on board but contradicts research by Ariffin and Ensaneh (2013) and by Oyewole (2007). This is because in-flight safety and security consists of preventive procedures and therefore they are beyond passengers' safety awareness. Moreover, these procedures need passengers' full cooperation despite the discomfort these procedures cause. Therefore, airlines can expect passenger dissatisfaction while trying to ensure their in-flight safety and security. This finding may jeopardizes aviation industry safety and security as airlines may try to compromise the in-flight safety and security procedures in order to increase passenger satisfaction. However, the moderator—safety knowledge—is the key factor. The analysis here confirms that passengers with more safety knowledge will be more satisfied when subject to more in-flight safety and security procedures. In other word, passengers with more safety knowledge are more cooperative and comply more readily with the procedures, which are strictly performed on board commercial aircraft, since these passengers have more understanding of how and why these procedures must be followed. Although they are not comfortable, they are for everybody's safety and security. This finding suggests that safety knowledge can enhance passenger satisfaction. The result supports the study of Edward (1990), which states that passengers are less likely to go against the rules when they know the reason for those rules, and also supports the study of Chang and Liao (2008), which states that an increase in cabin safety knowledge positively affected airline passenger behavior.

5.2 Limitations and Future Research Directions

Although the findings are interesting, a few research limitations need to be considered. First, the nonprobability sampling method and the very small-scale sample size may limit the generalization of the findings. The probability sampling method and larger-scale data collection will be needed in future research in order to get more reliable results. Second, data collection using the self-administered questionnaire may cause some inaccuracy or bias. Third, the air travel experience is a multistage process, which usually takes several hours. Since the survey was conducted after all these processes had been completed, the results could possibly be subjected to hindsight bias (Blank, et al., 2007). Moreover, any parts of the service delivery process can potentially suffer from halo effects (Slovic et al., 2002). To overcome these limitations, future studies might ask passengers to evaluate their experience at several points during the process, such as before boarding, after taking off, and before landing. However, to do this, the airlines' cooperation would be required.

5.3 Implications

The findings from this study provide some practical implications for both airlines and government to plan their policies regarding in-flight safety and security procedures.

The author found evidence that without safety knowledge, passengers tend to be dissatisfied when in-flight safety and security procedures are performed strictly. According to the International Civil Aviation Organization (2013), in-flight safety and security procedures are compulsory and must not be compromised. Therefore, the author suggests that both airline and government should provide more safety knowledge to passengers as this will enhance passenger satisfaction related to in-flight safety and security procedures. In practice, airlines provide passengers with only the minimum level of safety knowledge required: safety demonstrations on board, safety cards on board, and the briefing of passengers sitting in emergency exit rows. This is to avoid potential irrational passenger behavior passenger anxiety (Edward, 1990), both of which could create problems during flights. As seeking passenger satisfaction drives airline business operations, providing more safety knowledge to passengers will not only increase passenger satisfaction, but will also automatically urge airlines to strictly perform the in-flight safety and security procedures. Government could play an important role. First, government should consider increasing the minimum requirement of safety knowledge that airlines have to provide to passengers. Second, government may create a proactive approach to provide more safety knowledge to passengers, perhapsby giving presentations in tourism or airline exhibitions or through social media messages.

CONCLUSIONS

This study has introduced safety knowledge as a driver of airline passengers' satisfaction and perception of in-flight safety and security procedures. In summary, safety knowledge not only increases passenger satisfaction, but also increases airline in-flight safety and security standards. Importantly, the safety knowledge model should be carefully designed. It must be easy to understand and convenient to access.

REFERENCES

Air Canada. (2014). Flight Attendant. Retrieved November 03, 2014, from http://www.aircanada.com/en/about/career/section_attendants.html

Airlines, D. (2014). Flight Attendant Job Preview. Retrieved November 03, 2014, from http://www.deltajobs.net/flight_attendants.htm

Anderson, E. W., Fornell, C., & Lehmann, D. R. (1994). Customer satisfaction, market share, and profitability: findings from Sweden. *The Journal of Marketing*, 53-66.

Blank, H., Musch, J., & Pohl, R. F. (2007). Hindsight bias: On being wise after the event. *Social Cognition, 25*(1), 1-9.

Burdett, H. M., & Grant, R. L. (2010). *Passenger understanding of hand baggage retrieval during emergency evacuation.* Paper presented at the The Sixth International Fire & Cabin Safety Research Conference, New Jersey, USA.

Chang, Y.-H., & Liao, M.-Y. (2008). Air passenger perceptions on exit row seating and flight safety education. *Safety science, 46*(10), 1459-1468.

Chang, Y.-H., & Liao, M.-Y. (2009). The effect of aviation safety education on passenger cabin safety awareness. *Safety science, 47*(10), 1337-1345.

Chang, Y.-H., & Yang, H.-H. (2011). Cabin safety and emergency evacuation: Passenger experience of flight CI-120 accident. *Accident Analysis and Prevention, 43*(3), 1049-1055. doi: 10.1016/j.app.2010.12.009

Corbett, C. L., & McLean, G. A. (2010). *Passenger Safety Awarenes: U.S. Airways Flight 1549.* Paper presented at the The Sixth Triennial International Fire & Cabin Safety Research, New Jersey, USA.

Damos, D. L., Boyett, K. S., & Gibbs, P. (2013). Safety Versus Passenger Service : The Flight Attendants Dilemma. *The International Journal of Aviation Psychology, 23*(2), 91-112. doi: 10.1080/10508414.2013.772822

Department of Labor. (2012). Annual Report.

Edwards, M. (1990). Stress, behavior, training and safety. *Flight Safety Foundation, Cabin Crew Safety, 25*(3), 1-5.

Ekinci, Y., & Dawes, P. L. (2009). Customer perceptions of frontline service employee personality traits, interaction quality, and consumer satisfaction. *The Service Industries Journal, 107*(125), 503-521. doi: 10.1080/02642060802283113

Federal Aviation Administration Fire Safety. (2014). Retrieved October 10, 2014, from http://www.fire.tc.faa.gov/cabin.stm

Gilbert, D., & Wong, R. K. C. (2003). Passenger expectations and airline services: a Hong Kong based study. *Tourism Managment, 24*(2003), 519-532. doi: 10.1016/S0261-5177(03)00002-5

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2009). *Multivariate Data Analisys* (7th ed.). Upper Saddle River, NJ: Prentice Hall.

Hartono, W. (2011). Service Innovation: Key Factor to Face a Global Competition in Airline Industry.

Helmreich, R. L., & Merritt, A. C. (1998). *Culture at Work in Aviation and Medicine: National, Organizational, and Professional Influences*: Ashgate.

International Air Transport Association. (2013). Airlines Expect 31% Rise in Passenger Demand by 2017. Retrieved October 10, 2014, from http://www.iata.org/pressroom/pr/pages/2013-12-10-01.aspx

International Air Transport Association. (2014). Cabin Safety. Retrieved October 10, 2014, from http://www.iata.org/whatwedo/safety/Pages/cabin-safety.aspx

International Civil Aviation Organization. (2014). Safety Report. Retrieved October 13, 2014 http://www.icao.int/safety/documents/icao_2014%20safety%20report_final_02042014_web.pdf

Maslow, A. H. (1943). A theory of human motivation. *Psychological review, 50*(4), 370.

Mostert, P. G., & De Meyer, C. F. (2011). The influence of passenger satisfaction on relationship formation in the South African domestic airline industry.

Muir, H. C., & Thomas, L. J. (2004). *Passenger education: past and future*. Paper presented at the The Fourth Triennial International Aircraft Fire and Cabin Safety Research Conference, Lisbon Converence Center, Portugal.

Nameghi, E. N. M., & Ariffin, A. A. M. (2013). The measurement scale for airline

hospitality: Cabin crew's performance perspective. *Journal of Air Transport Management, 30*(2013), 1-9. doi: 10.1016/j.jairtraman.2013,03.001

Nunnally, J. C. (1978). *Psychometricc Theory* New York, NY: McGraw-Hill.

Oliver, R. L. (2010). *Satisfaction: A Behavioral Perspective on the Consumer* (Second Edition ed.). New York: M.E. Sharpe, Inc.,.

Organization, I. C. A. (2013). Safety Management Manual (3rd ed.).

Oxford Learner's Dictionaries. (2014a). Safety. Retrieved November 01, 2014, from http://www.oxfordlearnersdictionaries.com/definition/english/safety

Oxford Learner's Dictionaries. (2014b). Security. Retrieved November 01, 2014, from http://www.oxfordlearnersdictionaries.com/definition/english/security

Oyewole, P., Sankaran, M., & Choudhury, P. (2007). Consumer Choice of Airlines in Malaysia: A Synthesis in Perspectives from Participants in the Air Travel Market. *Jounal of International Consumer Marketing, 20*(1), 19-31. doi: 10.1300/J046v20n01_03

Park, J.-W., Robertson, R., & Wu, C.-L. (2004). The effect of airline service quality on passengers' behavioural intentions: a Korean case study. *Journal of Air Transport Management, 10*(6), 435-439.

Park, J.-W., Robertson, R., & Wu, C.-L. (2006). The Effects of Individual Dimensions of Airline Service Quality: Findings from Australian Domestic Air Passengers. *Journal of Hospitality and Tourism Management, 13*(2), 161-176.

Ringle, C. M., Sarstedt, M., & Zimmermann, L. (2011). Customer Satisfaction with Commercial Airlines: The role of perceived safety and purpose of travel. *Journal of Marketing Theory and Practice, 19*(4), 459-472. doi: 10.2753/MTP1069-6679190407

Slovic, P., Finucane, M., Peters, E., & MacGregor, D. G. (2002). Rational actors or rational fools: Implications of the affect heuristic for behavioral economics. *The Journal of Socio-Economics, 31*(4), 329-342.

Suki, N. M. (2014). Passenger satisfaction with airline service quality in Malaysia: A structural equation modeling approach. *Research in Transportation Business & Management, 10*, 26-32. doi: 10.1016/j.rtbm.2014.04.001

Tsaur, S.-H., Chang, T.-Y., & Yen, C.-H. (2002). The evaluation of airline service quality by fuzzy MCDM. *Tourism management, 23*(2), 107-115.

USA Bureau of Labor Statistics. (2014). Occupational Outlook Handbook. Retrieved November 03, 2014, from http://www.bls.gov/ooh/transportation-and-material-moving/flight-attendants.htm#tab-2