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SHORT REPORT

Effectiveness of slow-paced safety instruction videos in conveying flight safety information to young first-time flyers

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ABSTRACT

Flight safety represents an important area of research, as it is concerned with minimising risks for passengers. Videos are a potential medium for effectively spreading flight safety information and raising awareness among first-time flyers. However, the literature concerning the characteristics of videos that contributed to the effective conveyance of flight safety information is limited and inconclusive. This study aimed to assess the effectiveness of slow-paced safety instruction videos in conveying flight safety information to young first-time flyers. In addition, it sought to establish the moderating role of gender in this relationship. The experiment was conducted in a school with 128 student volunteers aged 14–16 years. They were required to solve the pre-test first, after which they were divided into two groups matched by pre-test score and previous flight experience. Subsequently, the experimental group was exposed to the flight safety video while the control group watched a fun video of the same length. The results confirmed the effectiveness of the slow-paced video as a flight safety information medium, regardless of the gender of participants, implying its relevance for the further development of (flight safety) educational videos.

Key words: flight safety, video, media, effectiveness

INTRODUCTION

Flight safety refers to a state of the aviation system in which risks associated with aviation activities are reduced as much as is reasonably practical.[1] Passenger safety remains crucial for airlines and governing authorities[2] whose focus is to reduce the number of aviation accidents and incidents. However, despite being considered a low-risk transportation industry, aviation still has a high number of hazards.[3] In 2009, aviation-related injuries resulted in approximately 1,000 hospitalisations in the United States, and 2% of these patients died in the hospital.[4] According to the International Civil Aviation Organization (ICAO), an accident has occurred approximately once in 400,000 flights during the last 10 years.[5] Most common passenger injuries include lower limb fractures, head injuries, open wounds, upper extremity fractures, and internal injuries.[6] Although there are some indications that the number of severely injured passengers declined slightly in the last few years,[7] the fact that the majority of these injuries are preventable[8] emphasises the importance of paying more attention to educational materials on flight safety.

Learning is a process of collecting new knowledge or modifying existing knowledge, skills, behaviours, preferences, and values. It further suggests a relatively permanent change in behavioural performance,[9] implying that even processes and skills like learning can, at least to an extent, be learnt.[10] One of the many theories that have attempted to explain how individuals learn is the vicarious learning theory propounded by Bandura.[11] This theory explains how individuals learn behaviours through imitation. It considers the learning process to be based on covert instrumental conditioning in which the observer learns responses through imitation and covertly exhibits the behaviour of a model.[11,12] In other words, an individual can learn through observation, without direct punishment and reinforcement of behaviour. This type of learning is called vicarious learning.[11,13,14] However, vicarious learning is influenced by external perceptions of the observed (perceived similarities with the model increase the likelihood of imitation) and behaviour relative to its complexity (simpler tasks are more likely to be imitated).[13]

Studies have established that vicarious exposure to computerized presentations leads to an increase in knowledge acquisition among students in middle school,[15] high school,[15,16] and college.[15,17] One of the popular methods of conveying messages is by audio-visual means, simply understood as using video.[18] Vicarious learning theory can also be applied in the creation of educational videos such as virtual video trips (e.g. Virtual Italy).[19] Video-based interventions have also proven successful and effective in correcting behavioural issues that are prevalent among children with autism.[20] For instance, literature has documented that infants as young as six months can process important information from videos and interpret televised actions in meaningful ways, similar to the way they interpret live actions.[21]

Considering the presented findings, we can deduce that pre-flight safety videos may also have a significant effect on modelling passenger behaviour. The key problem of flight safety instruction videos is that passengers do not pay enough attention to safety information presented by airline staff; only 30–40% of passengers pay attention to the safety instructions being conveyed.[22] However, problems also persist with the effectiveness of such videos in conveying safety instructions.[23] This area of learning, especially relevant during the initial phases of the COVID-19 pandemic, when most learning activities were conducted online, remains understudied and lacks a proper evaluation.[18]

The effectiveness of videos in individuals' learning processes should be modified by the elements of the multimodal learning theory,[24] which refers to the use of a multisensory approach to learning, in combination with experiences such as interactivity.[24,25] It is envisaged that the use of materials in multiple sensory modes (visual, auditory, written) in the teaching process can lead learners to perceive that the matter is easier to learn, thus improving their attention and learning performance.[24,26,27] This can be attributed to two characteristics of human cognitive systems. First, in line with the cognitive-affective theory of learning with media (CATLM),[28] the processing of different stimuli is conducted by different cognitive systems, with each system having a limited capacity. Therefore, the most effective method for enabling learners to cognitively process a larger amount of information is to present this information in multiple modes and modalities.

Furthermore, differences among people in the visual, auditory, reading-writing, and kinaesthetic learning styles have been established.[29,30] Visual learners learn best with the use of diagrams and symbolic devices. Readers prefer the use of text and printed words, auditory learners prefer 'heard' information, and kinaesthetic learners enjoy a combination of sensory modes.[29] Therefore, although healthy individuals can learn regardless of the input modality, matching modality with preference enhances the efficacy of the learning process. It is easier for individuals to process information when materials are presented in multiple sensory modes because it caters to every learning style. This was confirmed in a study conducted among first-year medical students in Turkey, where 63.9% of the participants preferred a multimodal approach to learning.[29] The finding was also confirmed in another study conducted among Arabian medical students, where 72.6% of the respondents preferred the multimodal learning style.[31] There is also proof that animated content can improve learning, especially when accompanied by narration, which works for both visual and auditory channels.[32]

However, the use of multiple modalities has drawbacks. Certain studies have shown that the presence of many stimuli can be beneficial in attracting attention.[33] Similar to external noise, too many stimuli not only undermine perception, especially if they are uniform, but also decrease learning capability.[34] This has also been observed in relation to the pace of video. While faster videos may attract attention better, the quality of processing the obtained information may be decreased due to limitations of the human information processing rate.[35]

Considering all the mentioned and potentially conflicting arguments, we conducted this study with the general objective of testing the effectiveness of slow-paced and simplified (i.e. without unnecessary stimuli) instructional flight safety videos on the knowledge of flight safety. Furthermore, due to the differences in health-related[36] and risky behaviours[37,38] whereby females are, on average, more caring regarding their health and safety than men, the study also sought to establish the moderating role of gender in the effectiveness of slow-paced safety instruction videos. We examined whether these videos had similar effects on male and female adolescents. The information obtained in this study can be used to increase the quality of future safety videos, which could increase flight safety in general and minimise the incidence of accidents by conveying information in a more efficient way.

METHOD

Research design

This study was designed as an experiment with two groups and two measurements*:* before and after the intervention*.* Participants chosen to take part in the study who filled out the pre-test questionnaire were balanced with respect to gender and flight experience*.* The researchers fed the answers of each participant into a computer and ranked the participants based on their scores. Two lists were created: one for students with prior experience and one for students without prior experience. In the case of ties, participants were ordered alphabetically with respect to their second name. Those who had an odd-number rank in both groups constituted the experimental group, whereas those with an even-number rank constituted the control group. Each group went to their respective rooms equipped with projectors, where they were verbally instructed to watch the videos on a screen. After watching the video, knowledge tests including the same content as the pre-tests were distributed, and the students solved them. Figure 1 graphically represents the described process.

The focus group discussions were conducted after the study with each group to provide a quick debriefing and discuss any relevant questions. The main goal of this focus group was to gain more insight into how students perceived the flight safety video and its characteristics.

Participants

The convenience sample used in this study comprised 128 students (50% male, aged 14–16) drawn from a reputable government school in a town near Bangkok, Thailand, which lacked an airport. After the initial screening, 64 students who reported having previous flight experience (i.e. they reported that they had flown in an airplane at least once prior to this study) and 64 students without such experience were chosen as participants of the experiment, which took place on 15 May 2015.

Instruments

a. Videos

As a treatment, participants in the experimental group watched a video on flight safety that lasted 5 min and 36 s and was generally slow-paced (under 140 words per minute). The video was hosted in Thai by two flight attendants – one male and one female – but translated into English after each topic, in line with standard flight safety protocols. The video comprised 812 words. The topics covered in the video included the evacuation procedure and the use of curtains, seat belts, oxygen masks, and life vests. The video was designed to minimise distracting cues. The control group was exposed to an entertaining video of the same length as that of the experimental group. The entertaining video was an excerpt of a well-known British comedy, with no scenes or scripts related to air travel.

b. Questionnaire

The same knowledge test that included items on the evacuation procedure and the use of curtains, seat belts, oxygen masks, and life vests was presented to all participants, both as a pre-test and as a post-test. The test was constructed for the purpose of this research and consisted of 20 questions in the True/False format (e.g. While seated, it is advisable to wear the seat belt), covering the key contents in the video. Correct answers were scored as ‘1’ and incorrect as ‘0’. This resulted in the theoretical score of the test ranging from 0 to 20 points, with higher scores indicating more knowledgeable participants. The test was printed, and the students had 15 minutes to solve it individually. Prior to the application, the initial set of questions was evaluated by three flight safety experts. The initial questions were modified according

to the recommendations of flight safety experts who were familiar with the purpose of this study. The procedure was repeated multiple times until all experts independently agreed that all the included questions were relevant to flight safety.

Procedure

Prior to conducting this study, informed consent from all relevant stakeholders (principal, teachers, students, and parents) was requested and granted. All stakeholders had the opportunity to refuse participation without any negative consequences. The students who were chosen to participate came from a pool of students who willingly provided informed consent to participate in the study, and their parents approved their participation. Later, schoolteachers gathered student volunteers and relevant socio-demographic data. Sixty-four students with prior flight experience and 64 without were chosen to participate in the study, with male students comprising half of both groups. On the day of the study, all participants were asked to come to the school auditorium, where the research process began. The adherence to ethical standards on research with humans was confirmed by the institution of the first author.

RESULTS

To test the difference in mean test scores before and after the video, a t-test for paired samples was applied. The results are shown in Table 1, along with relevant descriptive data.

Table 1 Results of a t-test on differences in knowledge on flight safety with respect to viewing the flight safety video

Group	Experience	n	Pre-test		Post-test		Paired sample t-test	
			M	*SD*	*M*	*SD*	*t*	*p*
Control	With	32	15.12	1.79	16.44	0.84	-5.06	<0.001
	Without	32	14.50	2.03	15.59	1.37	-3.33	<0.001
Experiment	With	32	14.78	1.91	19.44	0.84	-14.72	<0.001
	Without	32	14.06	1.87	19.53	0.71	-15.60	<0.001

As the results in Table 1 suggest, students achieved better results when they solved the same test the second time, regardless of their previous flight experience and the viewing of the video (all *p*s < .001). This was expected because of repeated exposure to the same questions. However, the effect size of the change was several times smaller in the control group (Cohen's d = 0.94 and d = 0.63 for participants with and without flight experience, respectively) than in the experimental group (d = 3.16 and d = 3.87 for participants with and without flight experience, respectively). This indicated the effect of watching the educational video, given that the groups has been matched based on their pre-test scores. In fact, a ceiling effect was observed in the experimental group. An independent samples t-test that was also applied to assess the potential gender differences in the effectiveness of the video yielded no significant results (Table 2).

Table 2 Results of t-tests on gender differences in average results of flight safety knowledge in pre-test and post-test

Sex	*N*	Male		Female		Independent samples t-test	
		M	*SD*	*M*	*SD*	*t*	*p*
Pre-test	64	14.33	1.77	14.91	2.03	-1.72	0.09
Post-test	64	81.17	2.05	69.17	1.98	0.35	0.73

The output of brief focus group discussions generally confirmed the following findings: Students considered the flight safety video interesting and were not bored by the presented materials. No suggestions regarding improvement in the video quality were provided by the students. Overall, they considered the subject relevant and expressed their willingness to learn more about flight safety.

DISCUSSION

The results of the study demonstrated that participants' knowledge improved significantly after watching a flight safety video and there were no significant differences in knowledge improvement between male and female participants. These results are in accordance with vicarious learning theory, which suggests that videos can be a valuable tool for learning new information.[11,13,14] Our participants increased their knowledge about flight safety solely by watching a pre-flight safety video, thus learning through observation. The results are also in accordance with the multimodal learning theory, which elaborates on various sensory modes as facilitators of learning in individuals.[24,26,27] Videos provide information through visual and auditory channels, thus enhancing the learning process.[32] This finding was confirmed in our study through the significant effect of video exposure observed among the sampled respondents, particularly on conveying flight safety information. The results were also in accordance with previous studies that confirmed the usefulness of videos as tools for information transmission related to safety.[39,40]

However, the findings of this study were established under artificially controlled conditions that did not resemble airports or aircraft. Additionally, having agreed to participate in the study and having received instructions from the researchers as authority figures, the students were more likely to focus on the video. As noted by previous studies, pre-flight safety videos have been used in the aviation industry to prepare passengers for emergency situations and to educate them on how to behave in such situations. However, their effectiveness has remained uncertain due to passengers' lack of attention to them.[23] Although a video may be very successful in conveying information, it cannot convey information if passengers do not pay attention to it. This introduces a distinction between the ability to attract attention and the ability to maintain attention to convey knowledge. While our findings clearly demonstrate that simplified slow-paced videos are effective in maintaining attention and conveying knowledge, their ability to attract attention in the first place may be undermined.[41]

Different strategies can be applied to draw attention. While a large number of stimuli can be effective in attracting individuals' attention, e.g blinking lights, loud sounds, and moving television images,[33] some researchers have suggested that oversaturation of stimuli can lead to disturbed perceptions and decreased learning ability.[34] Moreover, while fast-

paced videos are more successful in attracting attention,[42] the processing of information may be decreased because of the limited human information processing rate.[35] Although humorous content and employment of celebrities may also be effective in attracting passengers' attention,[23,43,44] application of such methods may undermine information processing and, consequently, flight safety knowledge.

While all these factors undermine prolonged knowledge transmission, these complex stimuli tend to grab more attention than simple ones.[41] This implies that complex and fast-paced stimuli may be more effective at drawing attention than maintaining it. Altogether, this indicates that the optimal strategy would probably combine high-engaging, complex, and humorous content to attract attention with slow-paced and less cognitively intensive instructional content. However, because this combination was not empirically tested in our study, the latter statement does not serve as a conclusion but as a hypothesis for future studies to test on different samples and in different circumstances.

Several limitations of this study should be considered when interpreting the results. Next to questionable ecological validity due to school setting, this study tested only one combination of pace and quantity of stimuli: slow pace and reduced stimuli quantity. As such, no conclusions regarding the effects of other combinations of stimuli properties can be drawn. Additionally, videos in this study were presented without distractors (e.g. background noise and late passengers trying to store their luggage). To increase the robustness of these findings, further tests should be conducted in the form of experiments in a more realistic natural setting such as an airport to observe the effectiveness of different combinations of video pace and quantity of stimuli. In addition, this study focused on a single exposure of the content, whereas frequently flying individuals may be exposed to flight safety videos multiple times, especially if the flight is not direct. Therefore, although this study confirmed the effects of flight safety videos on flight safety knowledge, the findings may be more relevant for the first exposure compared to repeated exposure to similar content. Finally, this study focused on measuring knowledge of appropriate behaviours during flights, not actual behaviour. Therefore, no relationship between instructional videos and execution of precautionary behaviours was tested in this study.

CONCLUSION

Without delving into the effectiveness of separate components of the videos, this study has confirmed that slow-paced and simple pre-flight safety videos are effective in the transmission of flight safety information. Therefore, it provides an additional argument in favour of using instructional videos in education. The findings of the research are particularly relevant in the context of the concurrent COVID-19 pandemic, which has forced many educational institutions to move their courses online. Although the effectiveness of slow-paced videos was confirmed, this does not indicate that it was optimal, implying that modifying other elements of the presented materials could lead to even better results. Therefore, this study also provides a foundation for future research that should focus on the effectiveness of different components of the videos in a more naturalistic setting, to adapt them to a targeted audience and enable the optimal transmission of relevant information.

COMPETING INTERESTS

The authors declare that there is no conflict of interest.

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REFERENCES

1. Howell C. What is aviation safety? [Internet]. [Cited 2020 October 20]. Available from: http://aviation safetyblog.asms-pro.com/blog/what-is-aviation-safety
2. Seneviratne D, Molesworth BR. Employing humour and celebrities to manipulate passengers' attention to pre-flight safety briefing videos in commercial aviation. Saf Sci. 2015; 75(1): 130–135.
3. Molesworth BR. Examining the effectiveness of pre-flight cabin safety announcements in commercial aviation. Int J Aviat Psychol. 2014; 24*(4)*: 300–314.
4. Baker SP, Brady JE, Shanahan DF, and Li G. Aviation-related injury morbidity and mortality: Data from U.S. health information systems. Aviation, Space, and Environmental Medicine. 2009;80(12): 1001–1005, doi:10.3357/asem.2575.2009.
5. International Civil Aviation Organization. Accident Stats. [Internet]. [Cited 2021 July 8]. Available from: https://www.icao.int/safety/iStars/Pages/Accident-Statistics.aspx
6. Nable JV, Tupe CL, Gehle BD, Brady WJ. In-flight medical emergencies during commercial travel. New Eng J Med. 2015;373*(10)*: 939–945.
7. Federal Aviation Administration. Attention passengers: Sit down and buckle up. [Internet]. [Cited 2021 January 12]. Available from: https://www.faa.gov/news/fact_sheets/news_story.cfm?newsId=20074
8. Flight Safety Foundation. Cabin crews must capture passengers' attention in predeparture safety briefings. Cabin Crew Saf. 2000;35(4):1–11.
9. Gross R. Psychology*:* The science of mind and behaviour, 7th, London: Hachette UK. 2017.
10. Hosenfeld C. Learning about learning: Discovering our students' strategies. Foreign Language Annals. 1976;9(2): 117–130.
11. Bandura A. Vicarious processes: A case of no-trial learning. Advances in Experimental Soc Psychol.1965: 1–55.
12. Bandura A, Ross D, and Ross SA. Vicarious reinforcement and imitative learning. J Abnorm Psychol. 1963; 67(6): 601-607.
13. Friedman HS, Schustack, MW. Personality: Classic theories and modern research 5th, Boston, MA: Allyn & Bacon. 2012.
14. Nicolle A, Symmonds M, and Dolan RJ. Optimistic biases in observational learning of value. Cognition. 2011; 119(3): 394–402.
15. Craig SD., Gholson B, Brittingham JK, Williams JL, Shubeck KT. Promoting vicarious learning of physics using deep questions with explanations. Comput. Sci. Educ. 2012;58*(4)*: 1042–1048.

16. Craig SD, Brittingham JK, Williams JL, Cheney KR, and Gholson B. Incorporating vicarious learning environments with discourse scaffolds into physics classrooms. In: Craig SD, Dicheva D, Lester J, Mizoguchi R, Ogan A, Shute VJ, editors. Proceedings of the 14th International Conference on Artificial Intelligence in Education [Internet]. 2009 Jul 6–7; Brighton, UK; 2009 [cited 2021 January 16]. Available from: https://www.researchgate.net/publication/221297572_Incorporating_Vicarious_Learning_Environments_with_Discourse_Scaffolds_into_Physics_Classrooms
17. Gholson B, Coles R, Craig SD. Features of computerized multimedia environments that support vicarious learning processes. In: Khine MS, Saleh IM, editors. New science of learning. New York, NY: Springer; 2010; 53–77.
18. Bust PD, Gibb AG, Pink S. Managing construction health and safety: Migrant workers and communicating safety messages. Saf Sci.2008;46*(4)*: 585–602.
19. Snelson C. Web-based video in education: Possibilities and pitfalls [Internet]. TCC Worldwide Online Conference; 2008. Available from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.173.1086&rep=rep1&type=pdf
20. Lindsay CJ, Moore DW, Anderson A, Dillenburger K. The role of imitation in video-based interventions for children with autism. Developmental Neurorehabilitation. 2013;16(4): 283–289.
21. Hofer T, Hauf P, Aschersleben G. Infants' perception of goal directed actions on video. Br J Dev Psychol. 2007;25*(3)*: 485–498.
22. Corbett, CL, McLean, GA. Passenger safety awareness Reprise 2007: Still ignorant after all these years [Internet]. The Fifth Triennial International Aircraft Fire and Cabin Safety Research Conference; 2007. Available from https://www.fire.tc.faa.gov/2007conference/files/Evacuation/WedAM/CorbettPassSafetyAware/CorbettPassSafetyAwarePres.pdf
23. Lee CC, Wang SW, Hsu MK, and Jan SM. Air passenger's perception toward pre-flight safety briefing videos: Does it matter? J Air Transp Manag. 2018;72: 20–31.
24. Moreno R, Mayer R. Interactive multimodal learning environments. Educ Psychol Rev. 2007;19(3): 309–326.
25. Fadel C, Lemke C. Multimodal learning through media. In: Norbert MS, editor. Encyclopedia of the sciences of learning. Boston, MA: Springer; 2012; 2378–2381,
26. Sankey M, Birch D, Gardiner M. Engaging students through multimodal learning environments: The journey continues. Paper presented at: ASCILITE 2010: 27th annual conference of the Australasian Society for Computers in Learning in Tertiary Education: Curriculum, technology and transformation for an unknown future [Internet].2010. Available from http://www.ascilite.org/conferences/sydney10/procs/Sankey-full.pdf
27. Zywno MS. A contribution to validation of score meaning for Felder-Soloman's index of learning styles *[*Internet*]*. the 2003 American Society for Engineering Education Annual Conference & Exposition; 2003. Available from http://www4.ncsu.edu/unity/lockers/users/f/felder/public//ILSdir/Zywno_Validation_Study.pdf

28. Moreno R. Instructional technology: Promise and pitfalls. In: Pytlik Zillig L, Bodvarsson M, Bruning R, editors. Technology-based education: Bringing researchers and practitioners together. Greenwich, CT: Information Age Publishing; 2005; 1–19.
29. Baykan Z, Naçar M. Learning styles of first-year medical students attending Erciyes University in Kayseri, Turkey. Adv Physiol Educ. 2007;31*(*2): 158–160.
30. Fleming ND, Mills C. Not another inventory, rather a catalyst for reflection. To Improve the Academy. 1992;11(1): 137–155.
31. Nuzhat A, Salem RO, Quadri MS, Al-Hamdan N. Learning style preferences of medical students: A single-institute experience from Saudi Arabia. Int J Med Educ. 2011;2*:* 70–73.
32. Gilakjani AP, Ismail HN, Ahmadi SM. The effect of multimodal learning models on language teaching and learning. Theory Pract Lang Stud. 2011;1*(*10): 1321–1327.
33. Bickham DS, Wright JC, Huston AC. Attention, comprehension, and the educational influences of television. In Singer DG, Singer JL, editors. Handbook of children and the media 2nd. Thousand Oaks, CA: SAGE Publishing; 2012; 101–119.
34. Sternberg RJ, Pretz JE. Cognition and intelligence*:* Identifying the mechanisms of the mind. London: Cambridge University Press; 2005.
35. Žebec MS, Demetriou A, Kotrla-Topić M. Changing expressions of general intelligence in development: A 2-wave longitudinal study from 7 to 18 years of age. Intelligence. 2005;49*(*1): 94–109.
36. Deeks A, Lombard C, Michelmore J, Teede H. The effects of gender and age on health related behaviors. BMC Public Health. 2009;9(1):213.
37. Korn L, Bonny-Noach H. Gender differences in deviance and health risk behaviors among young-adult undergraduate students. Subst Use Misuse. 2017;53(1): 59–69.
38. Wu T-Y, Rose SE, Bancroft JM. Gender differences in health risk behaviors and physical activity among middle school students. J Sch Nurs. 2006;22(1): 25–31. doi:10.1177/10598405060220010501.
39. Hall A, Ho C, Keay L, McCaffery K, Hunter K, Charlton J, Brown J. Using instructional videos to promote correct use of child restraint systems*:* Qualitative consumer input and quantitative testing *[*Internet*]*. Australasian Road Safety Conference; 2017. Available from https://acrs.org.au/files/papers/arsc/2017/Hall_00099_EA.pdf
40. Shen J, Rouse J, Godbole M, Wells HL, Boppana S, Schwebel, DC. Systematic review: Interventions to educate children about dog safety and prevent pediatric dog-bite injuries: A meta-analytic review. J Pediatr Psychol. 2016;42*(*7):779–791.
41. Rutkowska N, Doradzińska Ł, Bola, M. Complex naturalistic stimuli are prioritized by attention when maintained in visual working memory. bioRxiv; 2020.
42. Sundar SS, Kalyanaraman S. Arousal, memory, and impression-formation effects of animation speed in web advertising. J Advert. 2004;33*(*1):7–17.
43. Tehrani M, Molesworth BR. Pre-flight safety briefings, mood and information retention. Appl Ergon. 2015;51*(*1): 377–382.
44. Tehrani M, Molesworth BR. The effect of mood on performance in a nonnormal situation. Aviation Psychology and Applied Human Factors. 2016;6*(*1):1–11.