

PASSENGERS' PERCEPTION OF THE SAFETY DEMONSTRATION ON BOARD
AN AIRCRAFT

By

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This work is dedicated to my family. They have always supported me in completing my thesis. I would say that love and support from them is an enormous impetus to make me successful. Moreover, they make me believe that there is nothing that perseverance cannot win. Therefore, with my efforts in completing this project, I would like to make them proud of me.

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ABSTRACT

The cabin safety demonstration on board an aircraft is one of the methods to provide safety information for passengers before aircraft takeoff. However, passengers' enthusiasm toward safety demonstrations is normally low. Therefore, the study of passengers' perception toward safety briefings on board an aircraft is important in increasing the safety awareness for the travelling public on commercial aircraft. A survey was distributed to measure the perceptions of Middle Tennessee State University (MTSU) faculty and staff, Aerospace students, and international students who have traveled in the last year. It was generally found that watching the cabin safety demonstration before aircraft takeoff was believed to be important for passengers. However, the attention to the safety demonstration remained low because the safety briefings were not good enough in terms of clear communication, particularly in the recorded audio demonstration and the live safety demonstration methods of briefing.

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CHAPTER I: INTRODUCTION

As safety is the most important issue for airline operations, the Federal Aviation Regulations require that all United States (US) air carriers provide a safety demonstration to all passengers before the aircraft takes off. There are three basic methods of presenting the cabin safety demonstration, including: (a) a video safety demonstration, which is presented by flight attendants or animated characters on a television monitor, (b) a live safety demonstration, which is performed by flight attendants orally briefing and demonstrating the safety procedures, and (c) a recorded safety demonstration, which is a safety briefing used on smaller regional aircraft that have only one flight attendant. These methods attract passengers' attention in different ways. Even though passengers receive the pre-takeoff safety demonstration, several accidents have shown that passengers cannot survive or protect themselves in emergency situations (National Transportation Safety Board, 1985). Parker (2006), in a report for the Australian Transport Safety Bureau, also stated that passengers' attention toward cabin safety still remains limited, even if there has been much research in the area of general aviation safety and training. Therefore, air carriers must provide an effective safety briefing that stimulates passengers' attention and can be understood easily, so as to increase passengers' perception of the safety demonstration on board.

Literature Review

On April 1, 1973, a Lockheed L-1011 experienced a loss of pressurization, and during the emergency descent, most oxygen masks automatically deployed in the cabin. Several passengers, however, placed those masks only over their mouths instead of over their noses and mouths. Flight attendants had to assist passengers with the use of their

oxygen masks, and also deal with passengers who were hyperventilating or suffering from an ear blockage due to the rapid change in cabin pressure. The flight attendants indicated this was difficult to accomplish while they themselves were breathing oxygen (National Transportation Safety Board, 1985). From this situation, it can be seen that panic can cause passengers to be unable to help themselves, and lack of attention to the crew safety briefing can lead to inappropriate actions of passengers (Edward, 1991).

In 2008, a Boeing 747-438 from Northwest Manila had to make an emergency descent; many oxygen masks dropped automatically from the compartment, but passengers did not know how to use those oxygen masks. Some grabbed a mask and held it over their mouth without securing the elastic strap, while other passengers donned a mask and forgot to pull it down so as to activate the oxygen flow. This resulted in flight attendants making an announcement again about how to don and activate the oxygen masks. After the incident, all of the passengers survived, but some received injuries. It was reported that one passenger smashed a panel of the ceiling to attempt to gain access to the mask (Australian Transportation Safety Bureau, 2010).

From these examples, it can be seen that cabin safety briefings are necessary for passengers to respond to emergency situations correctly, increase survival rate after aircraft accidents, and improve the understanding of passengers about the safety equipment and emergency procedures (National Transportation Safety Board, 1985). This statement is consistent with the Australian publication "Safety - no laughing matter?" (2013) which states that the more passengers absorb safety information, the better they will be able to act properly in an emergency. Therefore, the Federal Aviation Administration (FAA) and airlines have tried to find ways to educate passengers about

the safety equipment on board. It has repeatedly been found that providing good safety briefings can increase the survivability of passengers (Edwards, 1991).

The Importance of Safety Demonstrations

Providing for passenger safety on board is one of the significant issues for airlines. Passengers must be able to understand and know how to protect themselves in case of an emergency. Johnson (1998) indicated that passengers who are well prepared for emergency situations can help both themselves and other passengers, as well as respond to the emergency situation appropriately. Moreover, he published the book in an attempt to alert passengers how to better prepare themselves in case of emergency situations. He claimed that to survive in difficult situations on the plane, passengers need to follow four basic precautions. First, they have to pay attention to flight attendant briefings and demonstrations. Then, it is necessary for passengers to note the nearest emergency exit location. After that passengers ought to read the safety card, and finally they should question the flight attendant when they do not understand any safety instruction. The survivability of passengers in the case of an accident can be increased if safety briefings are delivered by a professional (The Cabin Safety Team, 2001). Cospers and McLean (2004) also mentioned that the cabin safety briefings are effective if passengers have a thorough understanding and familiarization with the safety information and equipment on board, such as the safety card, brace position, the nearest emergency exit location, and the operation of the oxygen mask and life vest.

Muir (2004, p. 19) mentioned that “passengers commonly underestimate their chances of survival of aircraft accidents.” Thus, to improve a passenger’s confidence in survivability, providing effective safety communication can give passengers a better

chance of survival in any life threatening situation (Cosper and McLean, 2004).

However, it is not easy to stimulate passenger interest in safety information. The Flight Safety Foundation (2000) has recommended that safety briefings should be improved to look more interesting in order to motivate passengers' attention toward cabin safety. In addition, Joseph and Mulin (2003) stated that safety briefings continue to receive less attention than they should from passengers. Moreover, Wood (2001) reinforced the opinion that passengers do not pay attention to watching the safety briefings or reading the safety pamphlet. Parker (2006) reported that some passengers pay attention in the safety briefing and crew announcement, while lower attention levels were found regarding the safety video and safety card. In addition, Edwards (1991) mentioned that several accidents have occurred because of passengers lacking concern regarding safety briefings and safety cards. For example, an accident occurred in Manchester, United Kingdom, when the aircraft caught on fire on the runway. There was a smoke hood onboard, which was equipment to protect individuals from toxic gases, especially carbon dioxide. However, this equipment could not be used correctly and promptly because there were no instructions provided for users. As a result, numerous passengers were unable to evacuate off the airplane after it stopped and burned on the runway (Edward, 1991).

Causes of Low Passenger Attention to Cabin Safety

Even though there is a cabin safety communication on every commercial flight, and most passengers think that paying attention is important, many studies have shown that passengers' enthusiasm toward safety on board is normally low (Parker, 2006). Furthermore, as a cabin crew manager mentioned in the article "Safety - no laughing matter?" (2013, p. 38), "Nothing is an issue until it becomes an issue" meaning that when

airlines realize the consequences of the lack of passenger knowledge in an accident, they will start trying to solve the problem and encourage passengers' awareness of safety.

There are many reasons why passengers have low interest in the cabin safety briefings. The Flight Safety Foundation (2000) stated that a lack of variety in presenting safety information and over confidence among frequent flyers were causes of passengers' lower attention. Furthermore, unclear announcements in the safety briefings and a lack of enthusiasm by flight attendants presenting safety demonstrations, could lead to the neglect of passengers toward the safety information. Overestimating the safety equipment and indoctrination by advertising that air travel is safe and always provides high priority to passengers can also cause passengers to ignore the dangers. As a result, passengers, especially frequent flyers, do not pay attention to the cabin safety briefings because they are confident in the airlines' safety and believe air transportation provides the best safety and security for passengers' travelling (The Flight Safety Foundation, 2000).

The Flight Safety Foundation (2000) also described that first-time fliers ignored the safety briefings due to an attempt to reduce their stress level. Moreover, the time at which passengers want to get relaxed after the stress of boarding and before takeoff, often coincides with the time the safety information is being presented; it blends in with information about the flight details, electronic devices, entertainment, and passenger's health. This may disrupt the passengers in the cabin and cause them to not be willing to pay attention (Safety - no laughing matter?, 2013).

A passenger's positive attitude toward the cabin safety communication can stimulate passengers' interest. Parker (2006) mentioned in his report that attitudes and behaviors play an essential role in passenger perceptions toward the safety information. If

passengers have a positive attitude toward on board safety, they will believe that the safety information is useful to them in an emergency and it could assist them to survive in an accident. On the contrary, if passengers have negative attitudes toward the cabin safety communication, the level of passengers' attention in the cabin safety is reduced. In "Safety - no laughing matter?" (2013), an experiment that was performed about the perception of passengers toward cabin safety was mentioned. Sixty one participants, who had an average age of 21, participated in a study on the effectiveness of three cabin safety briefing videos (Qantas John Travolta video, Air New Zealand Richard Simmons Video, American Airlines video). As a result of this study, it was found that people who watched Air New Zealand's disco-inspired Richard Simmons video had a more positive mood than those who watched the other two videos. However, the results' two hours later, on a follow up test, indicated that participants who watched the funny videos (Air New Zealand and Qantas) had the same level of recalling key safety messages as participants who watched the video from American Airlines. Therefore, any entertainment in the video safety demonstration does not affect the recognition of safety messages. However, the experiment also showed that participants who received safety messages in a fun and entertaining way were equally effective at remembering the key safety information. Thus, creating a positive environment in the cabin could result in fewer mistakes and save many passengers' lives during a possible evacuation rather than the negative environment.

Another reason why passengers may not pay attention to the cabin safety briefings is the social norm (Parker, 2006). Social norms in the cabin have an influence on passenger attitudes toward safety communications and effect behavioral practices (Wood, 2001). Joseph and Moulin (2003) stated that if there is a lack of group participation,

leadership, and common experiences, airlines will not be able to increase the effectiveness of passengers' ability in cabin safety. They also mentioned that the influence of the in-cabin social and cultural group can affect safety reliability, the perception of the roles and abilities of the cabin crew, as well as the existing personal knowledge of the aircraft's safety system. However, this differs from the explanation provided by Wood (2001) that even without involvement from airlines and crew, passengers will seek participation with the same actions as other passengers. In addition, in "Safety - no laughing matter?" (2013) it was explained that most passengers thought it was not necessary to watch the safety demonstration on board because the safety messages overlap the safety card and safety briefings. As a result, passengers do not pay attention to the cabin safety briefing and are overconfident in the safety of aircraft. Furthermore, social pressure may make passengers believe that individuals paying attention to the safety briefings could be people without knowledge and inexperienced flyers. To protect their image, passengers will not show interest in the safety briefings (Flight Safety Foundation, 2000).

Flight attendants can be one of the reasons why passengers do not pay much attention to the safety demonstration on board. Passengers may pay more or less attention toward the safety information depending on their degree of belief in and acceptance of flight attendant professionalism (Flight Safety Foundation, 2000). Behaviors, deportments, emotions, and attitudes of flight attendants have an influence on a passenger's acceptance of safety information. Flight attendants have a direct role in passengers perceiving the safety information and they also provide leadership by being a safety commander in the cabin in case of emergency situations (National Transportation

Safety Board, 1985). For instance, when aircraft crash land or water ditch, flight attendants have to show their leadership by convincing passengers to follow safety procedures. The leadership of flight attendants can be established as soon as passengers board the airplane. The flight crews need to establish eye-to-eye contact with each passenger and maintain this connection until the safety demonstration. With this behavior, flight crews not only are able to attract passenger's attention to the safety demonstration and increase belief in flight attendants' capabilities, but they can also identify those passengers who could help during emergencies (National Transportation Safety Board, 1985). Therefore, providing flight attendant professionalism in terms of leadership is important. This could be beneficial in providing more effective safety briefings by flight crews, even though most air carriers do not provide leadership training to flight attendants.

Barkow & Rutenberg (2002) stated that the vocal qualities (i.e., monotone) of flight attendants giving the briefing, which is often performed by the senior flight crew or the purser, could cause passengers to be uninterested in the safety communication. Flight attendants may memorize the announcement and thus present the information out of sequence and fast. Additionally, the repetitive tasks of senior flight crew may cause boredom in the safety briefings. As a result, passengers perceive that the cabin safety briefings are not important and flight attendants as unprofessional. This can lead to passengers ignoring the cabin safety information.

Sometimes, because of a short taxi distance and expedited takeoff clearance, flight attendants may hurry in making the announcements and performing the safety demonstration (Flight Safety Foundation, 1975). Furthermore, with the many

responsibilities of flight attendants before takeoff, they may be tired and perform the safety demonstration unwillingly (Flight Safety Foundation, 2000). The exhaustion results in minimally effective flight attendant oral briefings and can also lead to passengers being indifferent toward the cabin safety information.

Hobica (2013) stated that another reason why passengers did not pay attention to the cabin safety demonstration is because they could not know the reasons why they have to follow the safety procedures. Flight attendants do not tell the reasons behind the safety rules. For instance, flight attendants do not tell the reasons why passenger must put the seat backs in the upright position, turn off electronic devices, and open the window shade before the aircraft takeoff and landing. These actions can establish unclear passenger understanding of the cabin safety procedures and lead them to ignore the safety instructions. Thus, every airline ought to share some of the insider safety information regarding what the flight attendants tell passengers to do by mixing it up and presenting it in different flights so as to increase understanding and reduce boredom in listening to safety information.

In addition, Barkow & Rutenberg (2002) found that there are some obstacles, which make passengers not understand and ignore the safety briefings. These include:

- The distance between the source and the listener of safety announcements by the flight crew can cause a misunderstanding of passengers toward the cabin safety information.
- The visual quality of video safety demonstrations, such as image size, image resolution, and the distance of the screen projecting the safety demonstration to

the passengers, can be a barrier for passenger understanding of the cabin safety information.

- With activities that passengers have never practiced and numerous complicated safety instructions, it is relatively difficult for passengers to understand.
- Characteristics of passengers, especially disabled people and those who lack language skills, can make it difficult to understand the safety briefings. It can be seen that in this situation flight attendants would not do only the group safety briefings, but they would have to provide individual safety briefings, particularly for the passengers who might be poorly served by the group briefing (Barkow & Rutenberg, 2002).

Given that few people pay attention to the safety demonstration on board an aircraft or read the safety card, passengers may take inappropriate actions in an emergency situation (Parker, 2006). As a result, there are few people who can help themselves survive after an aircraft accident. Therefore, airlines need to give effective safety information in a form which encourages passengers' interest. The details contained in the safety briefing should be understood easily and clearly (National Transportation Safety Board, 1985).

History of Safety Rules and Regulations on the Plane

Cabin safety has long been a concern of federal regulators. Since accidents can occur during flight, The Federal Aviation Regulation, Part 41, in 1945, required that "Passengers shall be acquainted with the location of emergency exits, with emergency equipment provided for individual use, and with the procedures to be follow in case of an

emergency landing on the water.” Furthermore, Part 40, in 1956, provided additional information for an oral briefing on a demonstration of life vests, operation of emergency exits, and the location of life rafts. In 1963, Part 42 added more details about no smoking on the plane, the use of seatbelts, emergency evacuation procedures and the location and operation of the oxygen system. To be more secure, the Federal Aviation Administration (FAA) also sets the regulations requiring the safety card to be available to each passenger seat to supplement the flight attendants during the oral briefing and demonstration.

Recently, the International Civil Aviation Organization addressed the use of Portable Electronic Devices (PEDs) on board an aircraft and the Federal Aviation Administration (FAA) made recommendations “on allowing additional PEDs without compromising the continued safe operation of the aircraft” (Greenyer, 2014, p. 37). Until October 2013, after a final report was announced, many commercial airlines both in American and European Countries allowed passengers to use small and handheld devices during all phases of flight. The committee of the Health & Security for the Association of Flight Attendants has an argument about the FAA actions. Candace Kolander, a coordinator in the Association of Flight Attendants, made a speech at World Airline Training Symposium (WATS) 2014 that “the FAA failed to fully explore a number of considerations such as the possible adverse effects of unsecured PEDs and attached power cords during an incident or accident” (Greenyer, 2014, p. 37). The large number of passengers using and carrying PEDs on board an aircraft can cause a problem for evacuating passengers out of an aircraft because a sudden crash of an airplane during takeoff and landing can make passengers lose hold of their PEDs. As a result, the evacuation pathways could be obstructed. Thus, instead of flight attendants suggesting

passengers turn off all electronic devices during all phases of flight, they have to announce for passengers to “secure small items in their hands” (Greenyer, 2014, p. 38). This new procedure creates a lot of questions to the flight attendants about public safety. Moreover, with passengers now able to use PEDs during all phases of flight, including the crew briefings, the importance of safety information would be reduced and ignored. Greenyer argues that because cabin safety is a key essential to enhance operational safety and improve survivability in case of an emergency, changes in the in-flight use of PEDs need to be considered and guidance material by the ICAO provided so as to address information to passengers and policies for prohibiting the use of devices under specific circumstances.

Safety Procedures on the Plane

The Cabin Safety Team (2001) provided guidance for airlines in establishing the safety procedures on the plane. The duties and responsibilities of the crew start with the pre-flight check procedures and end with the post-flight phase duties. There are many duties that flight attendants have to do before boarding passengers. Not only is the pre-flight check about safety and security, but they also prepare food and beverage for serving passengers. The Flight Safety Foundation (2000) stated that excessive allocation of responsibility to cabin crew can cause reduced safety briefing effectiveness.

When it is time for boarding passengers, flight attendants have to pay attention to passengers and their baggage because storing baggage in an improper location could result in risk and accidents. Prior to departure, verbal instructions and safety demonstrations will be provided to passengers in order to help them have knowledge about on board safety instructions, and know how to behave during the flight. A safety

demonstration will advise passengers with specific information to prepare and guide them in the event of an emergency. The safety briefings should be related to safety both in normal and abnormal circumstances. The Cabin Safety Team (2001) mentioned that the safety instructions should consist of the restrictions of using electronic devices and smoking, how to fasten the seatbelt, donning the oxygen mask, wearing a life vest in case of a water ditching situation, locating the nearest emergency exits, storing a tray table and putting a seat back into an upright position, as well as indicating the seat pocket where the safety card is located.

In “Cabin Safety: Information about the safety measure you will need to follow while on board” (2013) John and James, Director of Flight Standard Service, mentioned the Federal Aviation Regulations Part 121 about the procedures and details of safety briefings as follows:

- (1) Before takeoff, each passenger has to be briefed about prohibited smoking on the plane, permissible times, conditions, and limitations to use portable electronic devices, the use of safety belts, compliance with lighted passengers information signs and cabin crew instructions, the location of emergency exits, and the type, location, and use of required flotation equipment. Moreover, crewmembers have to advise and explain the location of survival equipment such as the use of oxygen equipment, and supplemental information such as the location of the safety cards that contain additional safety information on the plane. Besides, if the flight involves extended overwater operations, flight attendants must brief passengers about location and operation of life vest, life raft, and slide/ raft.

- (2) After each takeoff, flight attendants will make an announcement that passengers should keep their seatbelt fasten. “Cabin Safety” (2013) described that passengers are recommended to keep the belt fastened throughout the flight and when the seat belt sign is on in order to protect themselves from injury.
- (3) Before landing, passengers need to fasten seatbelts, secure tray tables, set seat backs in fully upright position, and stow carry-on baggage as well as movie/video screens to prepare the cabin for landing.
- (4) After landing, passengers will be briefed to remain seated with seatbelts fastened until the “seatbelt” sign has been turned off. This is for passengers’ safety and the safety of those seated around them. In addition, they will be reminded by flight attendants to use caution when opening the overhead bin.

Equipment for Doing the Cabin Safety Demonstration

Before aircraft takeoff, passengers need to understand the basic safety equipment so as to help themselves in case of emergency. The safety demonstration will be presented by flight attendants or videotape in order to explain the five pieces of safety equipment, which are necessary items to know during the flight. This equipment consists of:

(1) Seat Belt

Passengers need to comply with the safety rule that wearing a seatbelt during takeoff and landing can protect themselves from injury. They can notice the fasten seatbelt sign located above their heads. If it is illuminated, passengers have to fasten the seatbelt until the seatbelt sign has been turned off. Moreover, in case of an emergency, even if passengers cannot see the illuminated signs, they

can also hear the need to fasten their seatbelt from the announcement of the pilot. In addition, keeping the seatbelt fastened during the entire flight is necessary. Quick (2012) stated that emergency situations can happen without warning; sometimes airplanes have to confront bad weather or mechanical problems. Therefore, wearing the seatbelt during the entire flight is a passengers' best protection against any unexpected aircraft movements.

(2) Oxygen Mask

Smith (2011) described that when the cabin is pressurized, a sudden leak or hole into the fuselage can cause depressurization. Passengers and crew would not be able to breathe normally until lower altitudes are reached. In this case, the oxygen masks will drop automatically over their head in order to provide the supplemental oxygen needed due to the event of a loss of cabin pressure.

Passengers need to pull down the oxygen masks to activate the oxygen flow, then place the oxygen masks on over their noses and mouths and secure them with the elastic band. If passengers are traveling with children, they should place the mask on themselves first before helping their children. As the cabin pressurization could change at any time during the flight, it is necessary for passengers to know how to use the oxygen mask in unexpected situations.

(3) Life vest

For international air transport, the International Air Transport Association (IATA) created rules and regulations that airplane traveling over longer distances, and over water, must include safety equipment in case of water emergencies. Life jackets and floatation devices serve as safety equipment to improve survival

chances. The location of life vests is specified depending on an aircraft seat. Life vests may be stowed under the seat or in the armrest. Besides, the passenger seat cushion may be detached to use as a personal flotation device. When it is time to use one, passengers have to wear the life jacket over their heads and secure the strap behind their back to keep their upper body above the water. Then, when passengers are about to leave the plane, passengers have to pull down the inflation tag to inflate the vests. If lifejackets do not inflate, passengers have to blow into the inflation tubes. Moreover, each vest has a rescue light on the shoulder for night use, which is water activated by removing the Pull to Light tab located on the battery. For a floatation device, the passenger can use the seat cushion as he holds onto the cushion to keep his head above water (Landon, 2013).

(4) The emergency exits locations

It is necessary to identify the locations of emergency exit to passengers because it could increase their survival chances. Passengers have to locate emergency exits both in front and behind them as well as count the rows between them and the nearest front and rear exits. During the safety demonstration, flight attendants will be the person who introduces the information on the locations and operations of emergency exits, as well as the emergency path light leading to the exit doors. The locations and operations of exit doors depend on the aircraft model (Parson, 2007). Moreover, especially for passengers who sit in the exit row, an explanation from the flight attendant about the operation of the emergency exit will be received because they sit in the nearest exit location. Passengers who sit there will be briefed on how to open the door, evacuate other

passengers fast and correctly, and to grab the safety equipment from that area to help passengers after evacuation (“Plane exit row seat is a responsibility,” 2005).

(5) The safety card

To provide more knowledge and answer the questions of passengers about safety on the plane, reading the safety information card before the aircraft takeoff can improve travel safety. The safety card is located on the seat pocket in front of passenger’s seat. It contains a lot of useful information to remind passengers on how to use all safety equipment when an aircraft confronts unexpected events. Therefore, to protect passengers from harm that may occur during the flight, reading the safety information card is necessary.

Factors Influencing Survivability in Emergency Situations

In addition to demonstrating the safety devices used on aircraft, Snow, Carrole and Allgood (1970) indicated that configurational, procedural, environmental, and behavioral aspects are also four main factors influencing passengers’ survival during emergency situations. Tomas, O’Ferall, and Caird-Daley (2006) also mentioned that the aircraft configuration and the physical layout of the aircraft cabin, such as seating capacity and aisle width, must be created to meet standards in order to evacuate and access emergency exits easily. Moreover, it is undeniable that the experiences and training of the cabin crew have an influence on the correct behavior of passengers in performing the safety instructions. Passengers will be able to perform well in accordance with safety procedures depending on the leadership of the crew. In addition, human behavior is one of the factors influencing passenger survivability in case of an

emergency. For instance, if passengers lack safety knowledge or have a problem with their physical condition, they may be unable to evacuate correctly and help themselves survive.

On January, 2010, when a US Airways flight 1549 crashed landed on the Hudson River, there were many passengers who survived on the accident. One of the reasons why passengers did not get hurt was because of the flight attendants. The captain on that plane gave credit to his entire crew team, who had a quick response in getting all passengers off the plane; flight attendants commanded the situation and helped passengers evacuate in an orderly and timely manner by using the slide raft. However, during evacuation, the flight crew observed that most passengers did not wear life vests before getting off the aircraft. Moreover, of the passengers who did wear life vests, most of them either struggled with the strap or did not secure it behind their back. It was indicated in the accident report that most passengers did not pay attention to the cabin safety demonstration because they flew often and thought they were familiar with the safety equipment on board (Rosenkrans, 2010).

The Efforts to Improve the Safety Demonstration

The Federal Aviation Regulations require that all air carriers provide a cabin safety communication for passengers in order to make them knowledgeable of the safety equipment and procedures during the flight (National Transportation Safety Board, 1985). The Cabin Safety Team (2001) also stated that either video or live safety demonstrations must be provided to passengers prior to takeoff, during the aircraft taxiing, in order to ensure that passengers know the safety instructions.

In the early 1980's, it was found that passengers who sat in the exit-row did not understand their responsibilities during an emergency situation. Therefore, the National Transportation Safety Board (1985) recommended that all passengers who sit in the exit row receive an oral briefing from cabin crew in order to be able to perform the safety procedure correctly and to assist in evacuating passengers out of the plane quickly and safely. Additionally, as airlines need to provide the safety briefings to reach all people on the plane, including disabled passengers, individual safety briefings are used as needed to educate passengers about cabin safety information (Barkow & Rutenberg, 2002). In 2000, the National Transportation Safety Board suggested the safety briefings should include exit operations and the slide usage. This is because half of the participants in the NTSB study believed that understanding about opening the exit door and using the slide usage in an emergency could help them survive and get out of the aircraft safely.

A part from "Fly Smart" in the Air Traveler's Guide of FAA, Flight Safety Foundation (2000) stated that the Federal Aviation Administration (FAA) tried to promote the interest of passengers toward safety briefings by indicating that those who read the safety card and watched the safety demonstration are smart people, because they know each aircraft has different safety procedures to follow in case of an emergency. This effort is similar to a leaflet provided by the Civil Aviation Authority (CAA) in 2000, which stated that studying the cabin safety information prior to departure can benefit passengers and their families by preparing them to implement the safety procedures in case of an emergency situation.

Even though there have been many suggestions to enhance safety briefings, this advice has been little used. Therefore, "attention capacity" should be increased so as to

attract passengers' attention toward the safety information (Joseph & Moulin, 2003). The Flight Safety Foundation (2000) mentioned that motivational prompting can increase the attentiveness of passengers during the safety communication. Thus, to induce many passengers to pay attention to the safety on board, emphasizing the difference of the safety systems on different aircraft, enhancing the attractiveness of flight attendants doing the safety demonstration, and emphasizing the importance of the safety information to passengers are necessary (Flight Safety Foundation, 2000).

Ron Welding, director of operation standards for the Air Transport Association of America, also explained in the Flight Safety Foundation (2000) article that increasing interest in the safety demonstration could be done by the United States airlines by creating and presenting the safety briefings in several patterns. For instance, some airlines try to change the introduction of the safety briefings every month, or present the safety briefings as an animated video to maintain viewers' attention. However, they should not use humor in the safety related public announcement because passengers may remember the joke rather than the content of the safety briefings.

Different Methods of Presenting the Safety Demonstration

Many air carriers nowadays use several techniques to attract passengers' attention toward the safety demonstration (Safety - no laughing matter?, 2013). Cebu Pacific Airlines is one of the air carriers launching the new safety demonstration on board; the flight attendants perform the in-flight safety demo by dancing to Lady Gaga (Daly Mail Reporter, 2010). Furthermore, Southwest Airlines, the major low cost carrier in the United States, has the attention of passengers on board as flight attendants rap the pre-flight safety instructions (McFadden, 2013). Delta Airlines uses the video safety

demonstration method, which is changed over time in a little different way. Therefore, passengers who fly with Delta Airlines are less likely to watch the same video safety demonstration (Delta' Preflight Safety Videos, 2012). Given their new pre-flight safety demonstrations to simulate passengers' attention, there are questions about how many essential safety messages passengers can receive, understand, and perform in case of emergency situations (Safety - no laughing matter?, 2013).

However, both video and live safety demonstrations are currently being used. Many major airlines, which operate wide-body airplanes, prefer to use the video safety demonstration because (a) it is convenient to broadcast, (b) it is a clear and slow announcement, and (c) in the case of an international flight, it is easy to provide a multi-lingual briefing. However, while the video safety demonstration may increase passengers' attention, it may reduce the flight attendant professionalism image in the eye of some passengers.

For low cost carriers, which operate narrow-body airplanes, the use of a live safety demonstration is preferred because flight attendants can show their professionalism, credibility, and leadership, all of which makes passengers pay more attention to the safety demonstration. The Flight Safety Foundation (2000) found that if flight attendants try to establish a good first impression, show leadership and reliability through their professional knowledge of aircraft safety, and express personal enthusiasm while performing the safety demonstration, it could encourage a favorable perception of safety by the passengers. Nevertheless, this method cannot provide safety information to all passengers; some passengers do not see flight attendants doing the safety demonstration and some do not understand the safety briefings because they are disabled

passengers. Thus, individual briefings must still be provided on the plane. Moreover, if flight attendants cannot make the safety announcement clearly, passengers are not capable of following the safety instructions and this could result in wrong actions (Flight Safety Foundation, 2000).

Making Safety Briefings more Effective and Memorable

Although safety briefings may receive less attention, particularly from frequent flyers, airlines should continue to increase the variety of safety briefings so as to attract passenger's attention, and assist them taking the safety messages to be an evacuation guideline in case of an emergency situation. Additionally, "Safety - no laughing matter?" (2013) suggested several ways to make safety briefing more effective and memorable by:

- Encouraging flight attendants using eye contact to get more passenger involvement in paying attention to the safety demonstration. Flight attendants should focus on the importance of the safety information for passengers.
- Using social media to display the safety briefings. This could transfer the safety messages clearly and make passengers perceive it easily.
- Using "life-size holographic virtual assistance" to provide the safety information to passengers.
- Educating passengers on the video safety briefings while in the airport terminal and departure lounge. This could help passengers practice and have knowledge especially on items such as brace positions, before flying.
- Conducting a passenger survey to test passenger understanding of the safety briefings.

- Adding more details of the cabin safety briefing on long haul flights.
- Focusing on pre-flight safety briefings when training cabin crew initially and during recurrent training.
- Introducing more information about the safety procedures and operation of exit doors, slides, and over-wing evacuations.
- Including non-aviation personnel to participate in designing the safety card, especially patterns and wording.
- Placing greater emphasis on overcoming language barriers and cultural variations.

Many air carriers are trying to find a way to retain passengers' attention during safety briefings. Some airlines change the pattern of presentation every month, while other airlines use animated video or singing or dancing of flight attendants to perform the safety demonstration. However, there are questions regarding whether these methods can increase the interest of passengers to understand and perform the safety instructions correctly or whether these methods only provide an entertainment to passengers (Safety - no laughing matter?, 2013). In addition, as the safety demonstration presents only five aspects of safety equipment, it is not clear that this is sufficient to educate passengers to help themselves in emergency situations.

Conclusion

Aircraft accidents and incidents still occur until the present day; those accidents bring serious loss and damage to passengers and an organization. One of the reasons why passengers incur serious injuries, death, and loss from an aircraft accident is because passengers do not pay attention to cabin safety briefings. Therefore, passengers are not

able to help themselves after an aircraft accident. The accidents that happened with a Lockheed L-1011 due to a loss of pressurization, a Boeing 747-438 due to low pressurization, and the US Airways flight 1549 that crashed landed on the Hudson River, are evidence indicating that passengers ignore the safety briefings. Even though airlines use video and live safety demonstrations, many studies have shown that passengers' enthusiasm toward cabin safety is normally low. It is not clear if this is because passengers cannot see the importance of the safety demonstration presentation on board an aircraft, or if the presentation of the safety briefings does not affect passengers' perception of safety. Many studies also show that passengers cannot help themselves in case of an aircraft accident, even though passengers perceive the safety briefings. So, how much safety information can passengers recall after watching various methods of presenting the safety demonstration? As many air carriers have different safety demonstrations to present on board an aircraft, to study passengers' perception about their inclination in watching the safety demonstrations is important, as it may encourage passengers to pay more attention to the safety briefing. In this study, the survey method will be used to collect data to analyze passengers' perception toward the safety demonstrations on board an aircraft.

Rationale and Research Questions

Because aircraft accidents and incidents can happen at any time, learning to study and understand the safety instructions is needed for passengers. Many air carriers present the safety information to passengers in various ways. However, passengers' enthusiasm toward the safety demonstration is still low. Moreover, even though passengers perceive the pre takeoff safety demonstration, several accidents have shown that passengers do not

know how to survive and protect themselves. Therefore, it is reasonable to assume that passengers are not interested in the cabin safety demonstration or the methods that were used to present the safety information by flight attendants, video, and recorded audio presentation. However, there are also many factors that can distract passengers' attention away from the cabin safety briefings. Investigating the passengers' perceptions toward the safety demonstration on board an aircraft is needed to determine what issues exist in passenger attention and understanding of aircraft safety briefings.

RQ1: Do passengers perceive that the safety demonstration presentation on board aircraft is important?

RQ2: Does the presentation method of the safety demonstration on board an aircraft affect passengers' perception of safety?

RQ3: How much safety information can passengers recall after watching an aircraft safety demonstration?

CHAPTER II: METHODOLOGY

In an attempt to study passengers' perception of the safety demonstration on board an aircraft, a study involving qualitative and quantitative research methods was indicated. The qualitative method allows the researcher to examine a general level of passengers' perception and satisfaction, while the quantitative method allows the researcher to analyze and interpret data from a rating scale survey. As the survey could be utilized to study a group's attitudes, behaviors, and demographic composition, it was the best approach for this particular study. An interview method could have been utilized instead, but an interview takes a lot of time to collect data, and participants may be inconvenienced by the interview. As a result, they may not provide much assistance or be unwilling to cooperate. Therefore, the survey was determined to be an appropriate method to study and collect this data, due to the fact that it could provide the benefits of time savings and low cost while still providing quality data.

The Middle Tennessee State University (MTSU) faculty/staff, MTSU Aerospace students, and MTSU international students, who have traveled on an airline since 2013, were asked to participate in this survey. Because they were people who had experience in watching the aircraft safety demonstrations in different ways, they could remember the safety information presented in an airplane to answer the survey questions. Although collecting data from passengers who had just arrived at an airport could have provided more effective results, there were limitations in conducting data collection at the airport which unacceptably delayed the research study. Therefore, the purposive sampling technique selected participants from a group of people at MTSU. The study received approval from the MTSU Institutional Review Board (IRB Protocol Number 15-036)

before the survey was distributed for participation. This IRB approval may be seen in Appendix A.

Dependent and Independent Variable Measurement

Dependent variable: Passengers' perception was the dependent variable.

Because passengers perceived the cabin safety demonstration in different ways (live safety, video safety, or recorded audio safety demonstration onboard an aircraft), they could have different perceptions toward safety demonstrations onboard an aircraft. The cabin safety demonstrations, which were presented by flight attendants, video, and record audio presentation, had effects on passengers' perception in various aspects, including the interest of passengers in watching the safety demonstration, the understanding of safety instructions and the use of safety equipment, and the clarity of safety presentation. In other words, the recognition of the passengers of their understanding of safety instructions was more or less dependent on the styles and methods of presentation.

Independent variables: The type of passenger briefing received was the independent variable in the study. The recorded audio safety presentation was the first type of independent variable that affected passengers' perception. Passengers who have traveled by a small regional aircraft would have learned their safety instructions via recorded audio, which was presented along with the safety demonstration by a flight attendant. The clarity of audio would be a crucial part of the cabin safety presentation. Passengers would be able to follow the safety instructions effectively if the recorded audio presented the safety information clearly and understandably.

The live safety demonstration was the second independent variable that would affect passengers' perception toward the cabin safety demonstration onboard an aircraft.

Each crew would stand in the exit row and demonstrate the safety information as well as explain how to use the safety equipment to passengers. Live safety demonstrations that were performed by flight attendants could create confidence in passengers and show the crew professionalism in using the safety equipment and providing assistance in case of an emergency.

The video safety demonstration was the third type of independent variable. Passengers could perceive the safety demonstration in the form of a video, which typically lasts 2 to 6 minutes. Furthermore, passengers who had problems in speaking the airline's official language or had a difficulty in hearing could read the subtitles about safety information. The style and method of presenting safety information by using video to convey safety knowledge and describe the practices in case of an emergency would affect the perception of passengers.

Participants

The sample for the study was selected from the total population of MTSU faculty and staff, MTSU Aerospace students, and MTSU international students who have traveled in the last year, 2013. They were people who had experience in watching the safety briefings on board an aircraft. Therefore, they could relate their perception towards the safety briefings and explain how much safety information they had learned. The sample was selected by the purposive sampling technique, which is a nonrandom sampling strategy. The total population of 1,970 people ($N = 1,970$) was taken into account in this study (780 MTSU faculty/staff, 640 Aerospace students, and 550 MTSU international students.). When compared with the table of Kerjcie and Morgan, 320 surveys need to be collected from MTSU faculty and staff, MTSU international students,

and MTSU Aerospace students. After distributing the survey, there were 308 people gave a response to this study, but there were 5 people who did not meet the criteria of the study because they had not flown in the last year. Therefore, the information from 303 respondents was used to analyze data.

Instrument

The survey was undertaken as an instrument to collect data and use it to study passengers' perception toward the safety demonstration on board an aircraft. The data was collected via a questionnaire from MTSU faculty/staff, Aerospace students, and international students who have traveled in 2013. A review of literature, academic journals and articles about the cabin safety communication were referenced and used as a direct input into the survey design. The questionnaire was reviewed by acquiring suggestions from advisors before sending it to the Institutional Review Board (IRB) to verify the correctness and examine any ethical issues. Then, the questionnaire was presented to a hypothetical sample in order to test airline passengers' understanding of the questions. Based on this test, confusing questions were resolved and redeveloped together with advisors before the actual use of the survey.

Questionnaire Design

To collect data for this study, a web-based survey instrument was created utilizing the online survey collection service SurveyMonkey.com. Participants were first presented with a consent blurb (see Appendix A) which allowed them to accept the terms of the survey before proceeding. Participants who accepted the terms were taken to the first survey page. All responses were collected anonymously, and all data was stored electronically for later analysis.

The questionnaire was designed into a mixed form including a closed form, open-ended questions, and a rating scale. The questionnaire consisted of five sections: demographic information, the importance of safety demonstrations on board an aircraft, passengers' perception toward cabin safety, and the ability of passengers to perform safety functions after watching the cabin safety demonstration. The survey concluded with asking for suggestions or recommendations regarding cabin safety briefings. The survey used can be found in Appendix B.

Procedures

Surveys were distributed to MTSU faculty/staff and MTSU international students via email, while students in the Aerospace Department received surveys in the classroom. The MTSU staff/ faculty and MTSU international students were able to complete the survey via SurveyMonkey. When they completed their questionnaires, the results of the survey were kept confidential and saved to the SurveyMonkey system. For data collected from MTSU Aerospace students, the researcher required permission from teachers in administering a survey in the classroom. Then, each class was given a survey by distributing a web link so that MTSU Aerospace students could access to the website and respond to the questionnaire via the SurveyMonkey system. The participants would take four or five minutes to complete the survey. Once the students completed the questionnaires, the results were sent directly to the researcher's database, so the data would be stored in the system and ready to be used in the analytical process. In order to obtain sufficient data to analyze, the researcher took approximately three weeks to collect the survey because there were approximately 780 MTSU faculty/staff, 640 Aerospace students, and 550 MTSU international students. After collecting data, the calculation of

mean, frequency, standard deviation, and the analysis of Chi-square were used to analyze and interpret data.

CHAPTER III: ANALYSIS OF RESULTS

The survey instrument used for this study was sent out to participants on September 5, 2014 and the last response was received on September 25, 2014. From the total population of MTSU faculty/staff, international students, and Aerospace students in this study, a total of 308 responses were received. However, the information from 303 respondents was used to analyze and answer the research questions because they were people who had traveled in the last year.

The Demographic Information

To analyze and evaluate the respondents' demographic information such as gender, age, education, and the frequency of using air transportation, the information was analyzed in terms of percentage, as can be seen in Table 1, 2, 3, 4, and 5.

Table 1 shows that the majority of respondents answering the survey were female (59.93%), while male respondents were 40.07%. Of the responses, one did not answer this question.

Table 1

The Number of Respondents Classified by Gender

Gender	Responses	Percentage
Male	123	40.07
Female	184	59.93
Total	307	100.00

Table 2 demonstrates that 61.04 % of respondents were people over 46 years old, followed by 30.19% respondents between the age of 31 and 45 years old, and finally 8.77% were people aged between 18 and 30 years old.

Table 2

The Number of Respondents Classified by Age

Age	Responses	Percentage
Under 18 years old	0	0
18-30 years old	27	8.77
31-45 years old	93	30.19
46 years or older	188	61.04
Total	308	100.00

Table 3 shows that the vast majority of respondents had completed a doctoral degree, while the minority of respondents had finished an associate's degree. There were five people who chose to not complete this question.

Table 3

The Number of Respondents Classified by Education

Education	Responses	Percentage
High School	13	4.29
Associate Degree	8	2.64
Bachelor Degree	40	13.20
Master Degree	100	33.00
Doctoral Degree	142	46.86
Total	303	100.00

Table 4 presents that 38.44% of respondents used air transportation 3 to 5 times a year, while 9.45% of respondents were people who rarely traveled by plane. There was one participant who did not answer this question.

Table 4

The Number of Respondents Classified by the Frequency of Using Air Transportation

The frequency of using air transportation	Responses	Percentage
More than 5 times a year	46	14.98
3-5 times a year	118	38.44
1-2 times a year	117	38.11
Every few years	29	9.45
Total	307	100.00

Table 5 shows that the vast majority of respondents traveled by plane over the last year (98.37%). There were 1.63% of respondents who had not traveled by plane in the last year and there were two people who skipped this question.

Table 5

The Number of Respondents Classified by People Who Have Flown in the Last Year

Last year traveled by plane	Responses	Percentage
Yes	301	98.37
No	5	1.63
Total	306	100.00

The Importance of Safety Demonstrations

In this section, there were five questions used to analyze and evaluate the importance of the safety demonstration. The respondents were asked to classify their perceived level of importance of the safety demonstration on a Likert Scale of 1-5, with 5 being strongly agree with the importance of safety briefings and 1 being strongly disagreeing with their importance. Then, the Chi-square was used to analyze each question and test statistical hypotheses. In the Chi-Square analysis of each question, those that “agreed” or “strongly agreed” were compared to those that “disagreed” or “strongly disagreed”

The first question asked respondents about the importance of the safety demonstration before aircraft takeoff. An average response of 3.87 was obtained, which is between “Neutral” and “Agree.” As can be seen in Figure 1, of the 302 respondents,

226 people replied “Agree” or “Strongly Agree” that watching the cabin safety demonstration before the aircraft takeoff was important for passengers, while 25 respondents indicated “Strongly Disagree” or “Disagree” for this statement. After using a Chi-square test, the difference between those that agreed and those that disagreed was considered to be extremely statistically significant. The Chi-square equaled 245.185 with 4 degree of freedom and the P-value was less than 0.001. This analysis indicates that the majority of respondents (74.83%) agreed that watching the cabin safety demonstration before aircraft takeoff was important.

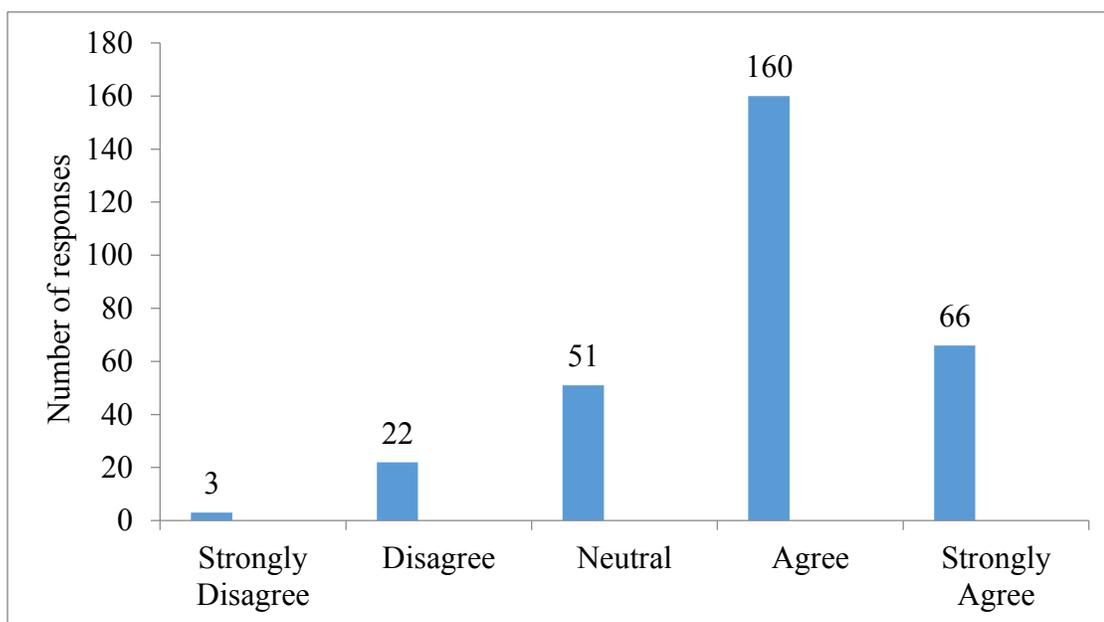


Figure 1. The Perception of Passengers toward Safety Briefings before Aircraft Takeoff

The second question in the survey asked respondents whether watching the cabin safety demonstration could help passengers follow the safety instructions correctly. An average response of 4.02 was obtained, which is between “Agree” and “Strongly Agree.” As can be seen in Figure 2, from the 301 respondents, 259 people indicated “Agree” or “Strongly Agree”, while 15 people reported “Strongly Disagree” or “Disagree.”

Therefore, the majority of respondents (86.04%) saw an importance of safety demonstration because it would help them to follow the safety instructions correctly. However, there were 15 respondents (4.98%) who did not believe that watching the cabin safety demonstration was important to assist them in following the safety instructions correctly. After using a Chi-square test, this difference between those who agreed versus those that disagreed was considered to be extremely statistically significant. The Chi-square equaled 409.349 with 4 degree of freedom and the P-value was less than 0.001.

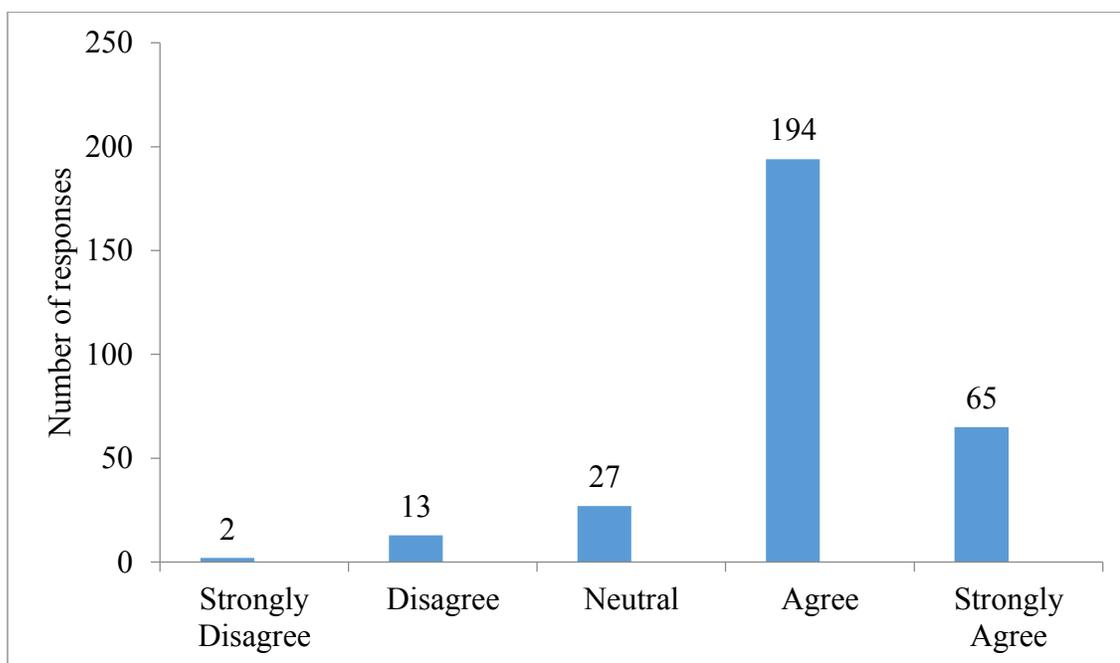


Figure 2. Passengers' Perception toward Safety Instructions

The third question in the survey asked whether the cabin safety demonstration could increase passenger confidence in the aircraft's safety. An average response of 3.35 was obtained, which is between "Neutral" and "Agree." As can be seen in Figure 3, of the 302 respondents, 144 individuals (47.68%) responded "Agree" or "Strongly Agree" to this survey question, with only 63 respondents (20.86%) they indicated disagreed or

strongly disagreed about this question. These results showed that passengers still see an importance of cabin safety demonstration because the majority of people felt it increased passenger confidence in traveling by plane. After using a Chi-square test, the difference between those agreed and those that disagreed was considered to be extremely statistically significant. The Chi-square equaled 118.033 with 4 degree of freedom and the P-value was less than 0.001.

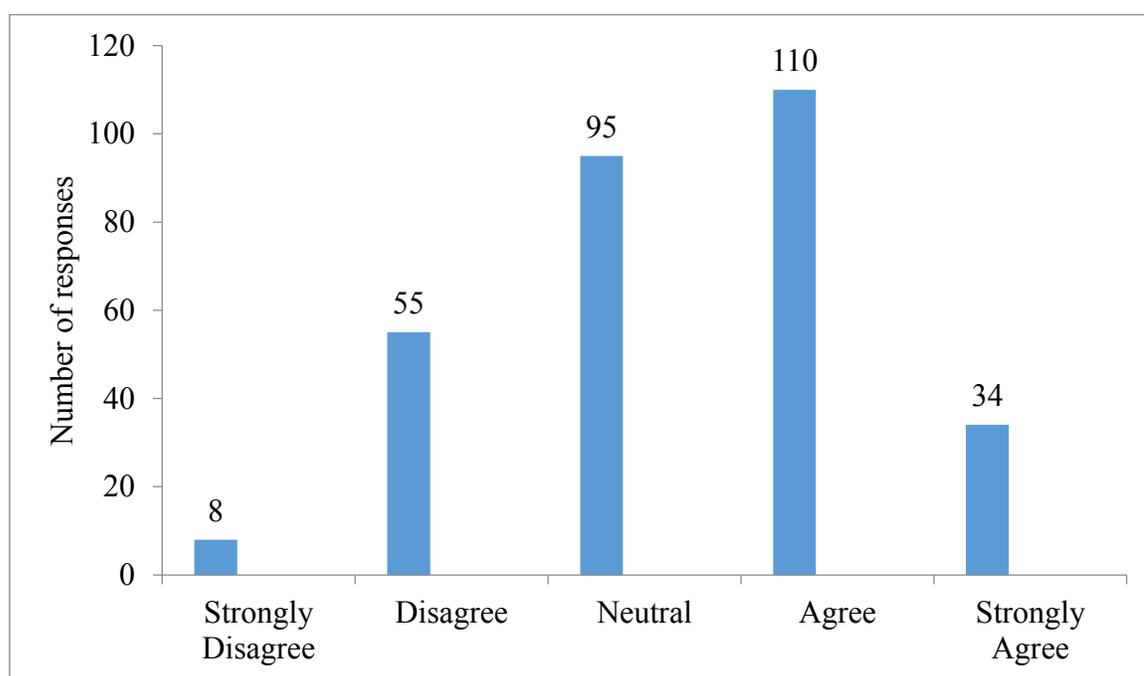


Figure 3. Passenger Confidence in Safety Demonstration

For the fourth question, the respondents were asked whether the cabin safety demonstration needed to be improved in order to attract passengers' attention. As can be seen in Figure 4, a mean response of 3.93 was obtained, which is between "Neutral" and "Agree." There were 216 respondents (72%) from 300 people who responded either "Agree" or "Strongly Agree" regarding improving the way cabin safety briefings are presented, while 33 people (11%) responded either "Strongly Disagree" or "Disagree" to

needing to improve the cabin safety demonstration. A Chi-square test indicated the difference between those that agrees and those that disagreed was considered to be extremely statistically significant. The Chi-square equaled 150.633 with 4 degree of freedom and the P-value was less than 0.001.

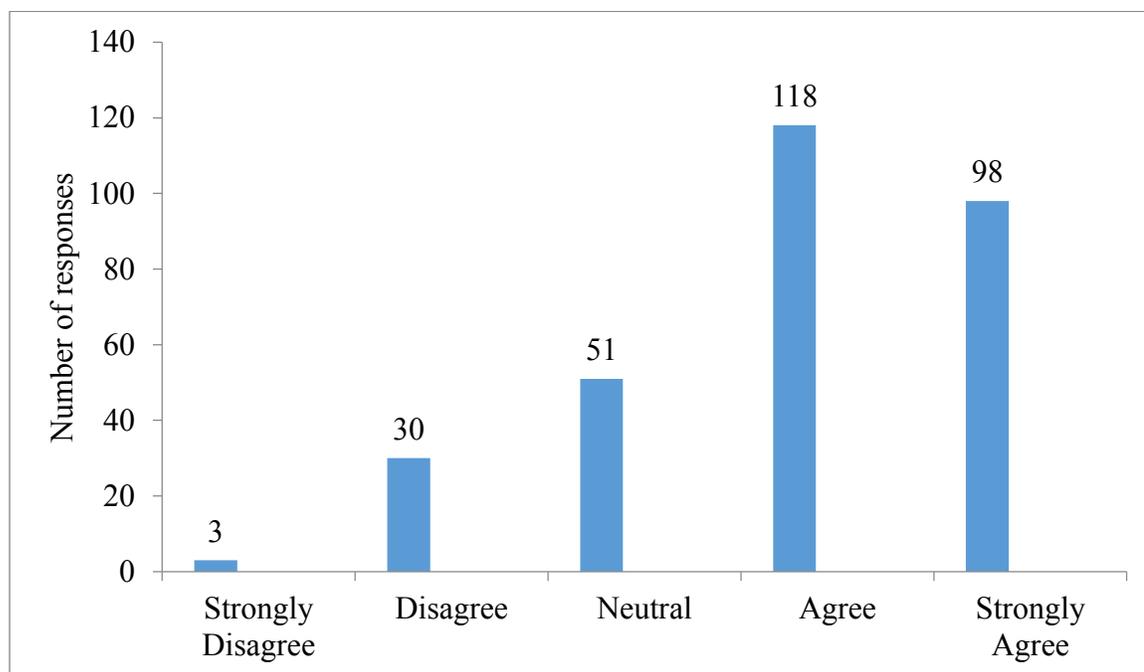


Figure 4. The Need to Improve the Safety Demonstration

The last question in this section asked about how importance it was that passengers know and understand the cabin safety equipment. As can be seen in Figure 5, an average response of 4.45 was obtained, which is between “Agree” and “Strongly Agree.” Of the 301 respondents, 52.49% of people answered “Strongly Agree” that passengers need to know and understand how to use the safety equipment, ranked next were 128 people at 42.52% agreed to this statement, but there were people (2.32%) responded that they “Disagreed” or “Strongly disagreed” about this point. After using a Chi-square test, the difference between those that agreed and those that disagreed was

considered to be extremely statistically significant. The Chi-square equaled 387.389 with 4 degree of freedom and the P-value was less than 0.001.

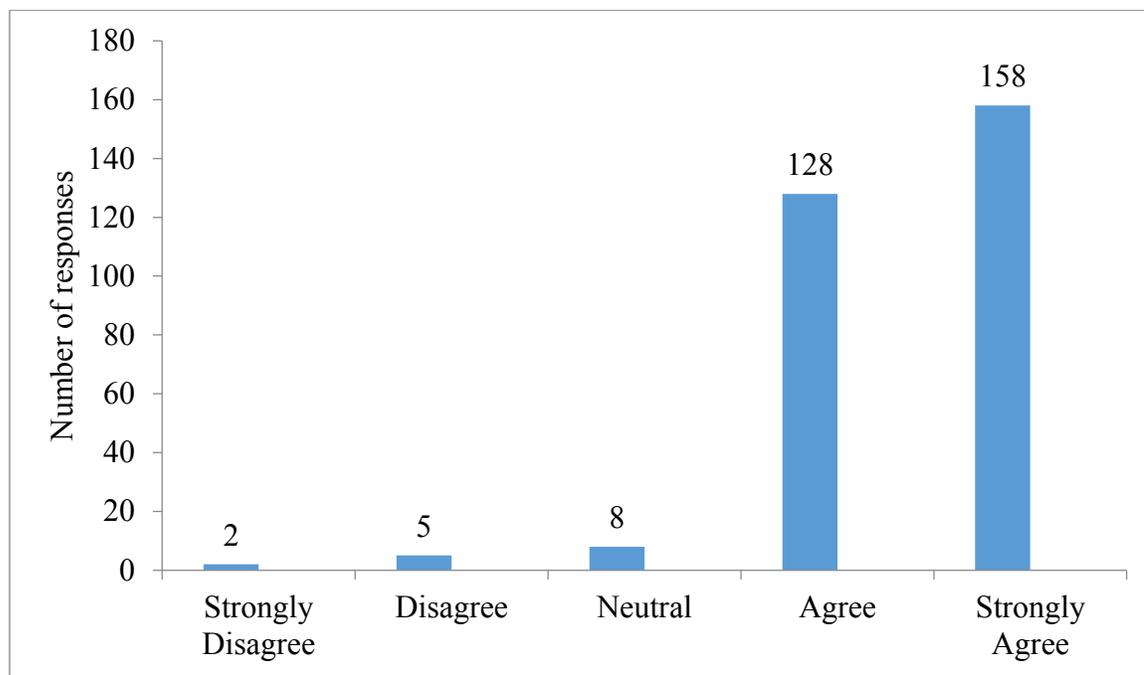


Figure 5. Passengers' Perception toward Cabin Safety Equipment

Passengers' Perception toward Cabin Safety Demonstrations

In this section, the respondents had to choose which safety demonstrations on board an aircraft that they had seen in the last year. Then, they were asked three questions about how well the safety briefings attracted and kept their attention, the effectiveness of the safety briefing method in educating passengers on the safety instructions, and the clarity of audio of the safety demonstration in presenting the safety information.

Participants were able to answer more than one type of safety demonstration if they had experienced multiple types.

A Recorded Audio Presentation

There were 176 respondents who saw a recorded audio presentation. As can be seen in Figure 6, the majority of people (31.82%) mentioned that a recorded audio presentation was “OK” in attracting and keeping passenger attention. Ranked next were people who answered “Poor” at 30.11%, “Fair” at 23.30%, “Good” at 9.66%, and “Very Good” at 5.11%, respectively. Moreover, many people (38.07%) stated that this method was “OK” in assisting them in understanding the safety instructions. Most people thought this safety demonstration was “Good” in presenting the safety information to the passengers in terms of the clarity of audio (44.32%).

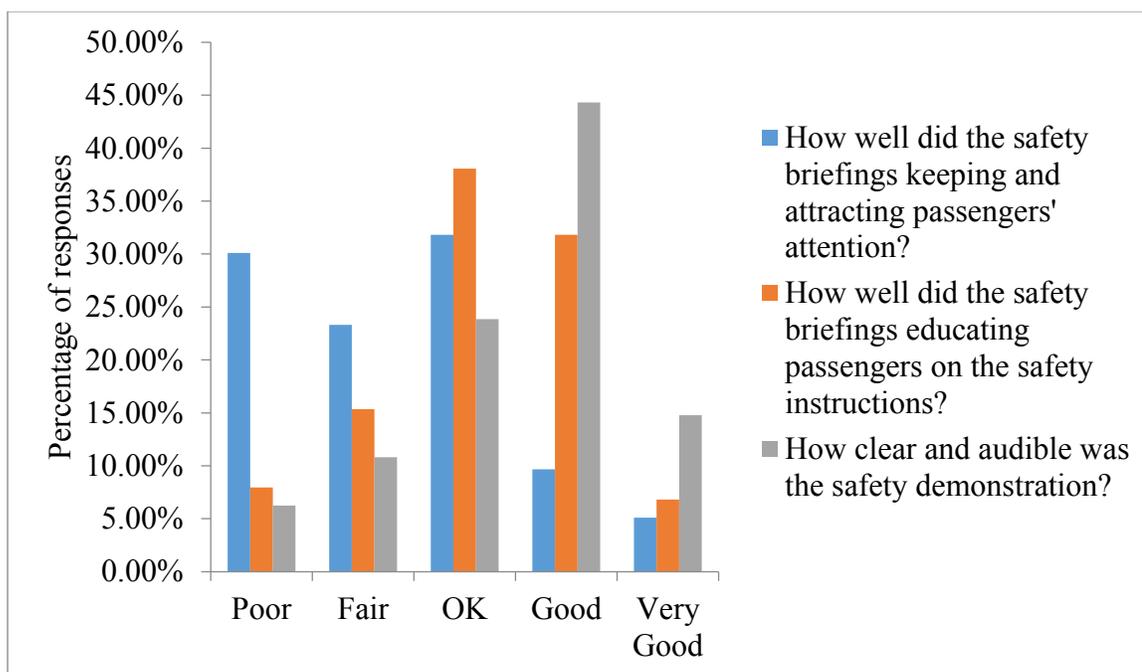


Figure 6. Passengers' Perception toward Recorded Safety Demonstration

A Live Safety Demonstration

From the total of respondents to this part of the survey (277), the majority of people who answered indicated “Fair” for a live safety demonstration in attracting and keeping passengers' attentions, at 29.71%. As can be seen in Figure 7, respondents (39.05%) mentioned that this method was good in educating people about safety instructions. Furthermore, many people agreed that a live safety demonstration had been presented clearly and audibly at a “Good” level (37.18%), while 5.78% of respondents expressed a “Poor” level toward the clarity of flight attendants making an announcement to present the safety instructions.

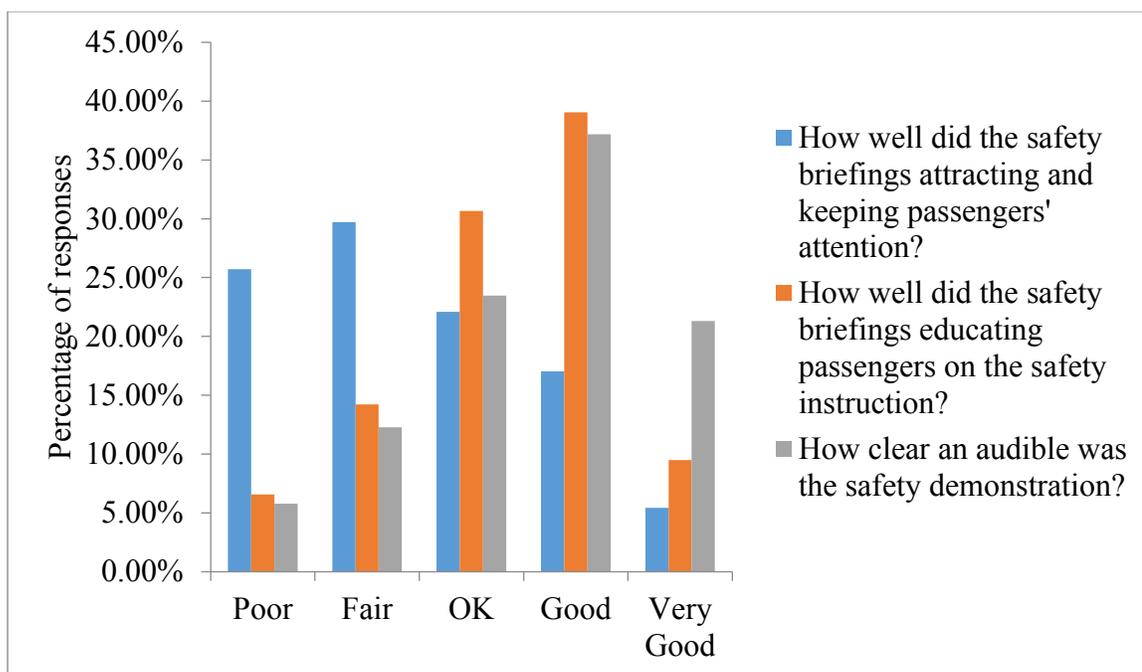


Figure 7. Passengers' Perception toward Live Safety Demonstration

A Video Safety Demonstration

Of the 150 respondents who indicated they had seen a video safety demonstration, 26.67% answered “Good” for how well the video attracted passenger attention, closely followed by people answering “OK” at 22.00%, “Very Good” at 19.33%, “Poor” at 18.00%, and “Fair” at 14.00% respectively (seen Figure 8). For the effectiveness of a video safety demonstration in educating passenger understanding the safety instructions, there were 42.95% of people who responded “Good”, 26.17% answered “OK”, 17.45% stated “Very Good”, 8.72% replied “Fair”, and 4.70% expressed “Poor.” Additionally, the majority of respondents at 40.94% replied “Good” to a video safety demonstration in aspects of clear audio in presenting the safety information; ranked next were respondents who replied “Very Good” at 30.20%, and 18.12% answered “OK.”

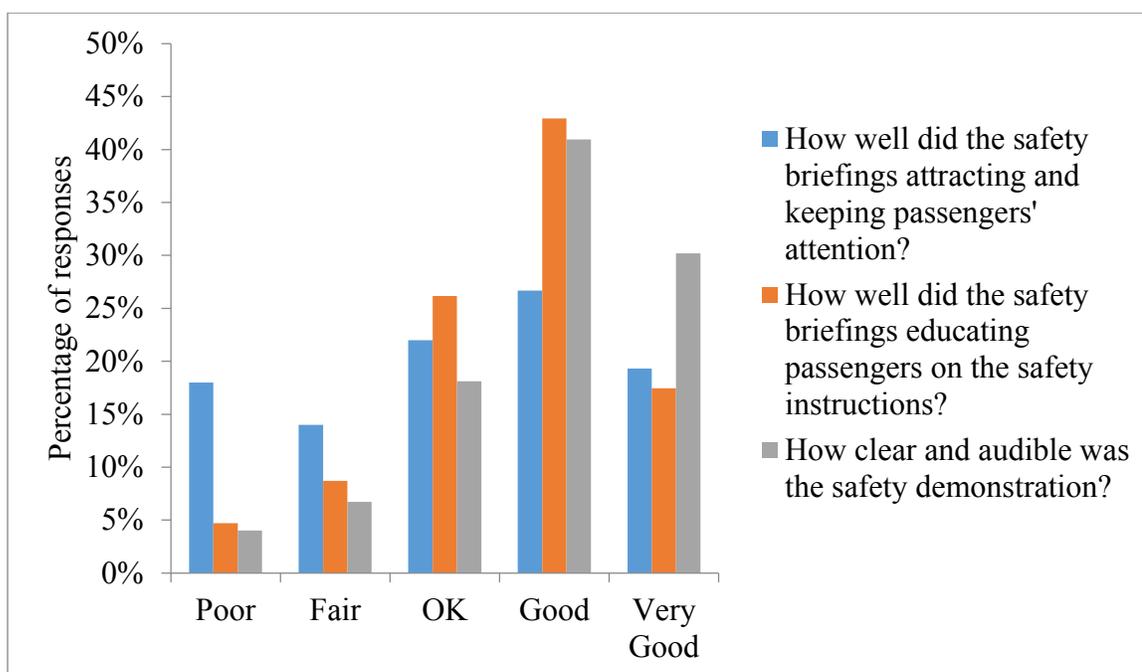


Figure 8. Passengers' Perception toward Video Safety Demonstration

The Ability of Passengers to Perform Safety Functions

In this section, the respondents were asked five questions about their ability to use the safety equipment on board an aircraft. There were five pieces of safety equipment listed, consisting of the seatbelt, oxygen mask, life vest, emergency exist, and safety card, which are the basic tools for passengers to assist themselves in case of an emergency.

A Recorded Audio Presentation

As can be seen in Figure 9, from 183 respondents, 81.97% answered that they could use the seatbelt completely and there was no respondent who replied that they could not to use the seatbelt after watching the safety briefing. Moreover, the vast majority of people (50.00%) responded that they were able to use the oxygen mask completely in case of an emergency and 36.81% answered “Fairly well” in their ability to use it. However, there was 0.55% of respondents who thought they could not use it if it necessary to do so. For life vests, 35.52% replied that they could use the life vest fairly well, closely followed by 30.05% that answered they could use the life vest completely, with 21.86% of people stating “Some” in life vest usage. Furthermore, there were 1.64% of respondents that stated they could not wear and use the life vest in case of an emergency. For identifying the nearest emergency exit, a large number of people (66.85%) responded that they could locate the nearest emergency exist completely, ranked next were respondents (28.73%) who replied “Fairly well.” However, there was one person who answered that they could not locate the nearest emergency exits. For the location of the safety card, a large number of people (80.11%) answered “Completely”, while a group of people replied “Fairly well” at 14.36% and only

one of respondent mentioned that they could not indicate the location of the safety card.

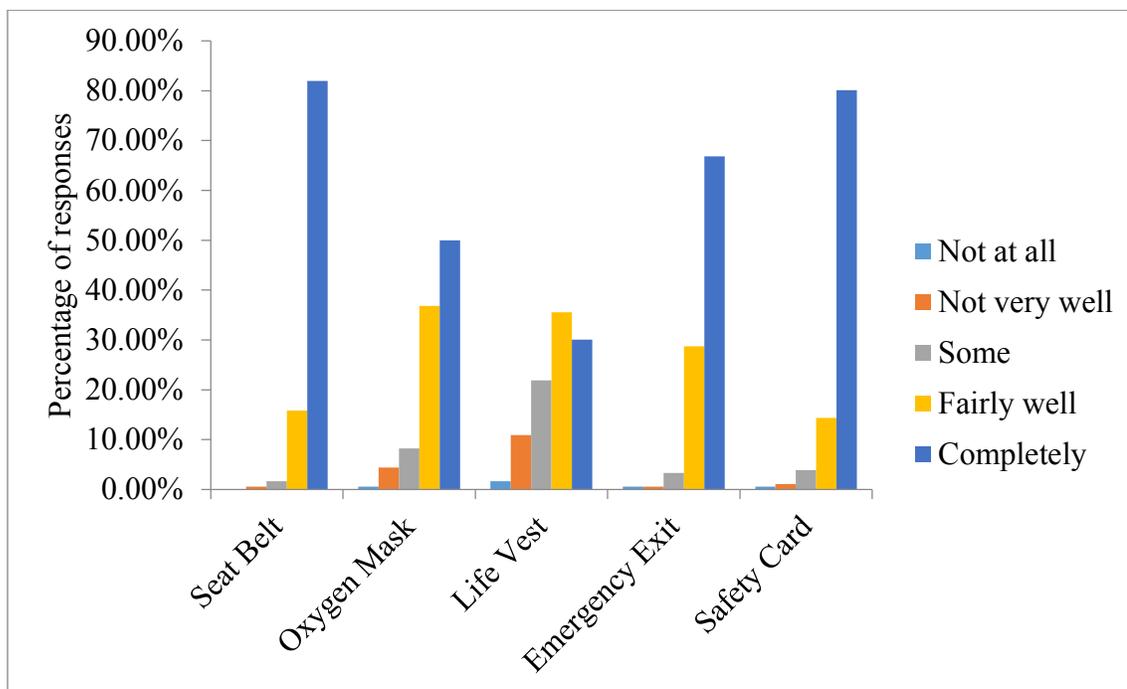


Figure 9. The Ability of Passengers after Watching a Recorded Safety Demonstration

A Live Safety Demonstration

As can be seen in Figure 10, of the 279 respondents regarding the live safety demonstration, the percentage of people who answered “Completely” in ability to use the seatbelt was remarkably shown at 87.77%, while individuals who replied “Fairly well” was 10.07%, and at 0.36% was people who answered “Not at all.” For understanding in using the oxygen mask, 50.36% of people replied that they could use the oxygen mask correctly and completely; ranked next were the percentage of people at 39.21% who answered “Fairly well.” However, there were some people (1.08%) that responded that they could not use the oxygen mask after watching a live safety demonstration. For life vest operation,

the majority of respondents answered “Fairly well” in using it at 45.68%. Moreover, 29.50% of people replied “Completely”, 16.91% of respondents answered “Some”, 6.12% of people showed “Not very well”, and 1.80% of people answered “Not at all” in their ability to use a life vest. For identifying the nearest emergency exit, a large number of people (70.50%) responded that they could locate the nearest emergency exit completely; ranked next were respondents (23.02%) who replied “Fairly well.” However, 1.44% of respondents replied “Not very well” in identifying the nearest exit and there was one person who answered that they could not locate the nearest emergency exits. For the location of the safety card, a large number of people (75.90%) answered “Completely”, while a group of people replied “Fairly well” (16.19%) and 1.08% of respondents mentioned that they could not indicate the location of the safety card.

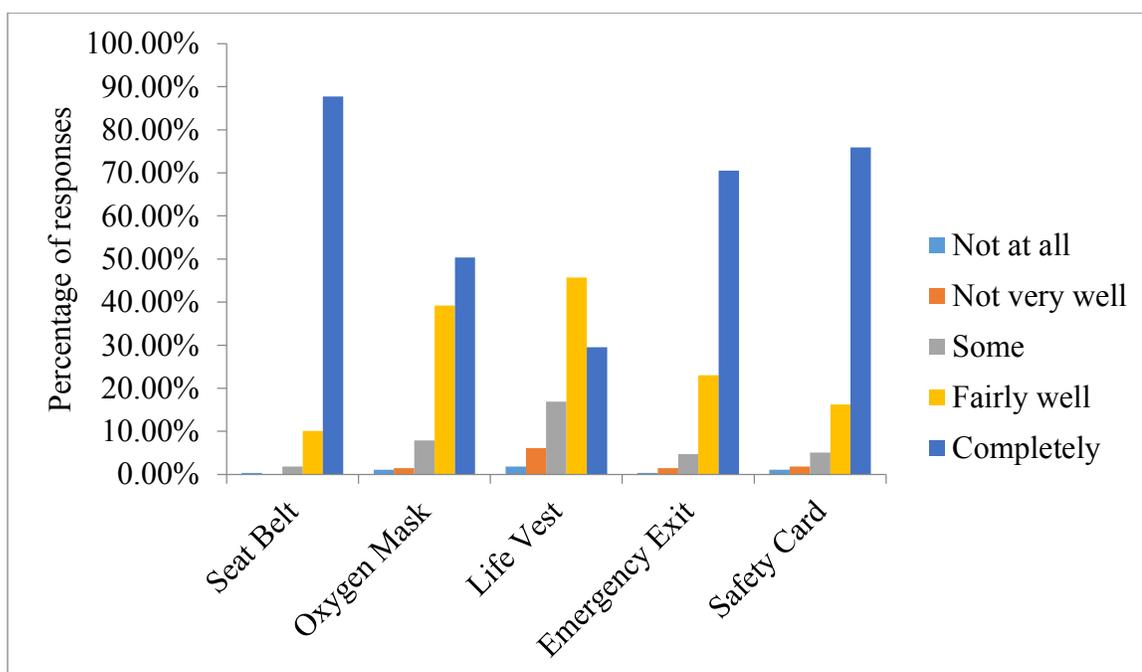


Figure 10. The Ability of Passengers after Watching a Live Safety Demonstration

A Video Safety Demonstration

As can be seen in Figure 11, there were 150 respondents participating in this section. The majority of people (83.22%) answered that they could use the seatbelt completely, but there was one person who replied that they could not use the seatbelt after watching a video safety demonstration. Furthermore, 55.33% of respondents represented the large percentage of people who could use the oxygen mask if it became necessary to do so. However, there were some people (32.67%) who replied “Fairly well” in using the oxygen mask. For life vest usage, 39.60% said that they could use the life vest fairly well, closely followed by 38.93% who answered that they could use the life vest completely. There were 14.77% of people who stated “Some” in using the life vest in an emergency case, 4.70% of people who answered “Not very well” and 2.01% of individuals who replied “Not at all” in using the life vest. For identifying the nearest emergency exit, a large number of people (65.33%) responded that they could locate the nearest emergency exit completely; ranked next were respondents (28.67%) who replied “Fairly well.” However, there was one person who answered that they could not locate the nearest emergency exits. For the location of the safety card, a large number of people (77.33%) answered “Completely” to locating where the safety card was, while a group of people (18.00%) replied “Fairly well.” One of respondent mentioned that they could not indicate the location of the safety card.

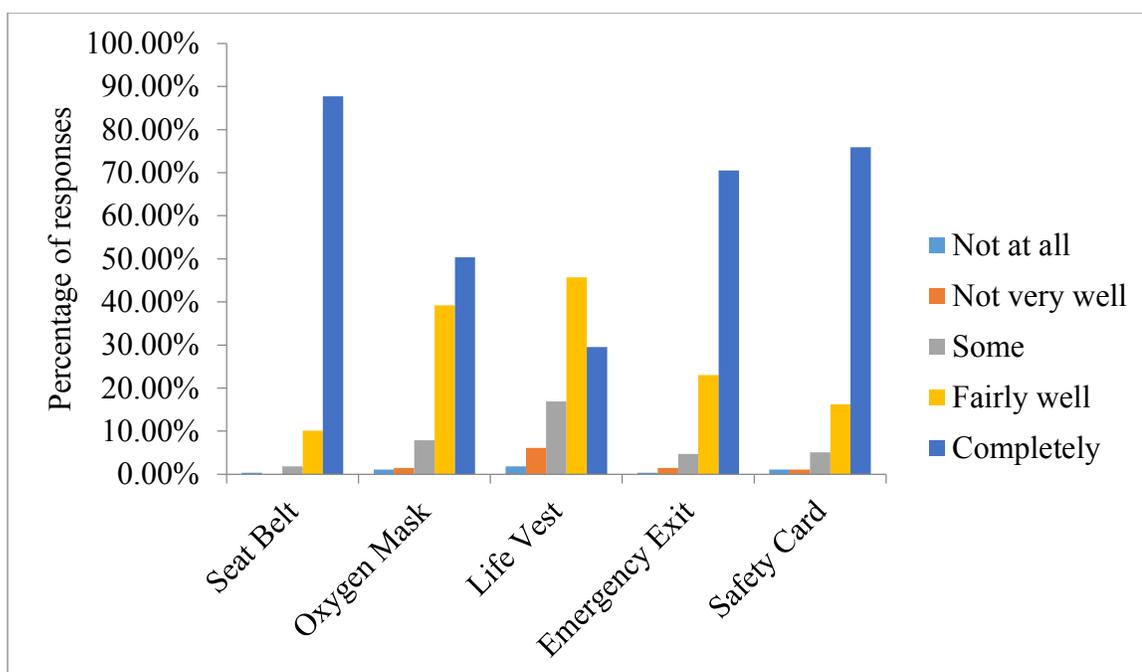


Figure 11. The Ability of Passengers after Watching a Video Safety Demonstration

The Effectiveness of Safety Demonstrations

From the responses regarding the three safety demonstrations (as seen in Table 6), it was revealed that the averages of respondents replies about the attractiveness of the safety demonstration, the effectiveness of the safety demonstration method to educate passengers about the safety instructions, and the clarity of presenting safety information of recorded audio presentations, live safety demonstrations, and video safety demonstrations were 3.00, 3.11, and 3.54 respectively. It can be seen that respondents replied “Fair” to the way in which the recorded audio presentation and the live safety demonstration could attract and keep passengers’ attention. Moreover, they replied that both methods were “Okay” in educating respondents to understand safety instructions. When they were asked to answer about the clarity of safety demonstrations in presenting safety instructions, respondents thought all methods were “Good” in giving clear safety

information. However, when considering the overall effectiveness of the safety demonstration, the video safety demonstration method had an average slightly higher than any other safety demonstration method in terms of maintaining passenger attention (Mean = 3.15), educating passenger understanding the safety instructions (Mean = 3.60), and presenting safety demonstration clearly (Mean = 3.87).

Table 6

Analysis of the Effectiveness of the Safety Demonstrations

The effectiveness of the safety demonstration	Average		
	Recorded	Live Safety	Video Safety
How well did the safety briefings that you have perceived attract and keep passengers' attention?	2.36 (Fair)	2.47 (Fair)	3.15 (Okay)
How well did the safety briefings that you have perceived educate your understanding the safety instructions?	3.14 (Okay)	3.31 (Okay)	3.60 (Good)
How clear and audible was the safety demonstration?	3.51 (Good)	3.56 (Good)	3.87 (Good)
Total Average	3.00 (Okay)	3.11 (Okay)	3.54 (Good)
Standard Deviation	0.587	0.570	0.363

Passengers' Perception toward Cabin Safety Equipment

Table 7 reveals that after watching the recorded audio presentation, live, and video safety demonstrations, respondents replied on average “Fairly well” regarding their ability to use the safety equipment (Means of 4.45, 4.48, and 4.50 respectively).

Furthermore, when considering the use of each type of safety equipment from the three safety briefings, it was shown that the use of seat belts had the highest total average (4.81), with respondents replying “Completely”, while the lowest total mean (11.85) was found in the use of life vests, with respondents answering “Fairly well” in using it.

However, when comparing the overall passengers' perception toward the cabin safety equipment, it was found that the video safety demonstration had a total average opinion slightly higher than any other safety demonstrations (4.50). But, there were some safety equipment shown in the video safety demonstration that had an average lower than the recorded audio presentation and the live safety demonstration, as follows:

1. The use of seat belts rating after watching the video safety demonstration had an average lower than the live safety demonstration (4.79 versus 4.85).
2. The identifying the nearest emergency exits item of respondents after watching the video safety demonstration had an average rating lower (4.56) than the recorded audio presentation (4.60) and live safety demonstration (4.62).
3. The locating of the safety card after watching the video safety demonstration had a rating lower than the recorded audio presentation, but higher than the live safety demonstration.

Table 7

Analysis of Passengers' Perception toward Cabin Safety Equipment

Passengers' Perception toward the cabin safety equipment	Average		
	Recorded	Live Safety	Video Safety
1. The use of seat belt	4.79 (Completely)	4.85 (Completely)	4.79 (Completely)
2. The use of oxygen mask	4.31 (Fairly well)	4.36 (Fairly well)	4.38 (Fairly well)
3. The use of life vest	3.81 (Fairly well)	3.95 (Fairly well)	4.09 (Fairly well)
4. The location of an emergency exit	4.60 (Completely)	4.62 (Completely)	4.56 (Completely)
5. The location of the safety card	4.72 (Completely)	4.64 (Completely)	4.69 (Completely)
Total Average	4.45 (Fairly well)	4.48 (Fairly well)	4.50 (Fairly well)
Standard Deviation	0.400	0.345	0.276

The Safety Demonstrations Seen in the Past

This question was used to evaluate the whole picture of respondents' opinion about their experiences with safety demonstrations on board an aircraft. The respondents could choose more than one answer about the method of safety demonstration that they had perceived.

It was found that a large number of respondents have had many experiences in watching a live safety demonstration (98.56%). A video safety demonstration was the next most common method that people have perceived (59.93%) and a recorded audio presentation on smaller regional aircraft was the safety demonstration which fewer people have seen in the past (35.74%).

The Safety Demonstration That People Preferred to Watch

In this section, the respondents were asked to choose which method of the safety demonstration they prefer to watch. A live safety demonstration was the most preferred method (61.85%). Ranked next was a video safety demonstration (44.07%), and a recorded audio presentation was the least preferred method that people selected to watch (3.70%).

Recommendations About Cabin Safety Demonstrations

The last question was an open response question where respondents were able to express their ideas about the ways in which an airline can increase the effectiveness of safety demonstrations on board an aircraft. As can be seen in Table 8, a number of respondents commented that they rather watch a fun safety demonstration. Forty-four people thought if the live safety demonstration were made with more humor, there would be more passengers paying attention to the cabin safety briefings. Another recommendation which was suggested by 10 respondents was that flight attendants should speak clearly and loudly without a monotone voice in providing safety instructions. The suggestion that flight attendants should not hurry in making safety briefings was commented on by 8 respondents. Furthermore, 6 respondents made comments about using eye contact to communicate with passengers while performing

safety demonstrations, and 6 people also suggested starting the presentation with other safety equipment rather than explaining how to use the seat belt first. When a video safety demonstration is used, 3 respondents thought passengers may pay more attention to the cabin safety demonstration if an airline allocated appropriate screen monitor locations in the cabin.

Table 8

Recommendations about Cabin Safety Demonstrations

NO.	Recommendations	Frequency
1	Make the cabin safety demonstration more humorous	44
2	Provide clear and loud safety announcements and do not use monotone for live safety demonstration	10
3	Use eye contact and interact with passengers	6
4	Use appropriate screen locations for video safety demonstration	3
5	Use less jargon and make the safety instructions not too wordy	5
6	Tell the reasons behind the safety instructions	1
7	Increase enthusiasm for the flight attendants	2
8	Should start presenting the safety equipment with other devices rather than explaining how to use the seatbelt	6
9	Add more information on how to use the flotation devices	3
10	Do not hurry to make the announcement	8
11	Increase the demonstrators onboard an aircraft	2
12	Add actual practice with oxygen mask and life vest	2
13	Train people who sit in the exit rows	2
14	Let the captain to make an announcement	1
15	Combine the video safety demonstration with the live safety demonstration	1
Total		93

CHAPTER IV: DISCUSSION AND RECOMMENDATIONS

The primary goals behind the research questions in this study were to measure passengers' perception toward the safety demonstrations on board an aircraft. The researcher evaluated the perceptions of passengers toward three different safety demonstration methods via a survey. The faculty/staff, Aerospace students, and international students at Middle Tennessee State University were the respondents who participated to provide data for this research, and their responses provided valuable data which was useful for future development of safety briefings. The study's results revealed answers to the three research questions:

Research Question 1: Do passengers perceive that the safety demonstration presentation on board aircraft is important?

From the statistical analysis of mean, frequency, standard deviation, and chi-square, it was revealed that respondents felt watching the cabin safety demonstration onboard an aircraft was important (Mean = 3.87). They believed that watching the cabin safety demonstration could protect them in case of an emergency because it gave them knowledge of using safety equipment in any serious events. Therefore, watching the cabin safety demonstration was important for them with regards to helping them use the cabin safety equipment and follow the cabin safety instructions correctly (Mean = 4.02). These results corresponded to the statement of Johnson (1998) that the more passengers were stimulated to watch cabin safety demonstrations, the better they could help themselves in an emergency situation. This also agreed with the information in the National Transportation Safety Board (1985) and in "Safety - no laughing matter?" (2013) publications, which indicated that passengers could respond to emergency

situations correctly, increase survival rates, and improve their understanding of the safety equipment and emergency procedures, if there were good cabin safety briefings onboard an aircraft.

Although passengers believed safety briefings were important, respondents were somewhat neutral ($M = 3.35$) regarding whether safety briefings increased their confidence in flying on an airplane. The National Transportation Safety Board (2013) described that few people survive after aircraft accidents, which could cause this perceived failure to increase the confidence of passengers. The Board also reported that there are still many passengers, who even after safety briefings are not able to protect themselves and use safety equipment correctly in emergency situations. Besides, Muir (2004) reinforced that one of the reasons why people lack confidence is because passengers underestimate their chances of surviving an aircraft accident. Furthermore, Hobic (2013) also gave another reason to support why respondents did not reply “strongly agree” toward an importance of safety briefings. He explained that flight attendants do not tell the reasons behind the safety rules, so passengers do not know the reasons why they have to follow the safety procedures.

Many respondents indicated that they believe there was a need to improve cabin safety demonstrations so as to attract passengers’ attention (Mean = 3.93). This agrees with the article “Safety - no laughing matter?” (2013), where it was explained that there is an overlap between the safety card and safety briefings, which could cause low passenger attention to cabin safety. Furthermore, overestimating the safety equipment, the conviction of provision safety and security by airlines for passengers’ traveling, and over confidence among frequent flyers can also cause indifference toward the cabin

safety demonstration (The Flight Safety Foundation, 2000). Additionally, Parker (2006) and Joseph and Moulin (2003) supported this with an argument that as airlines have strong social norms, it was seen as unnecessary for passengers to pay attention to cabin safety. Passengers believe they have good leaders on an airplane, and that flight attendants could help them effectively deal with emergency situations.

Research Question 2: Does the presentation method of the safety demonstration onboard an aircraft affect passengers' perception of safety?

To answer this question, three questions which asked the respondents about the attractiveness of safety demonstrations, the effectiveness of safety demonstrations to educate passengers about the safety instructions, and the clarity of audio of safety demonstration in presenting safety information, were used to answer this question.

From an overall study of each method of safety demonstration, it was revealed that the video safety demonstration was rated slightly higher in effectiveness than the other two types of safety briefings. "Safety - no laughing matter?" (2013) supported this conclusion, stating that using the video safety demonstration to display the safety briefings can transfer the safety messages clearly and make passengers perceive safety information easily.

For the recorded audio presentation and live safety demonstration, the methods were perceived as being "Okay" (Mean = 3.00 and 3.11 respectively), perhaps indicating that these presentations did not keep passenger attention as much as they should. Even though respondents replied that these two safety demonstrations presented a good level of safety communication, the safety demonstrations were not perceived to attract and keep passengers' attention as well as the video methodology. This corresponds to the

description of Barkow & Rutenberg (2002), which indicated that the vocal qualities of flight attendants giving the briefing could cause passengers to be uninterested in the safety communication. Flight attendants may also memorize the announcements, thus present the safety information out of sequence and too quickly.

Research Question 3: How much safety information can passengers recall after watching an aircraft safety demonstration?

The three types of safety demonstrations onboard an aircraft were analyzed to determine the perceived ability of passengers remember to the safety information. All three methods can be seen to be effective methods in educating passengers to use the cabin safety equipment correctly, with overall means of 4.45 (a recorded audio safety demonstration), 4.48 (a live safety demonstration), and 4.5 (a video safety demonstration). This is encouraging, the video method was overall just slightly higher than the other two methods, but not significantly. With the video safety type of demonstration, respondents felt comfortable with the steps for using the seat belt (Mean = 4.79), the location of the nearest emergency exits (Mean = 4.56), and the place where the safety card was located (Mean = 4.69). However, the understanding of using oxygen masks and life vests were slightly lower (Mean = 4.38 and 4.09 respectively). This was consistent with the description of Smith (2011) that passengers were less likely to be able to use the oxygen mask and life vest correctly because both of these safety devices were used only in an emergency situation. Furthermore, Barkow and Rutenberg (2002) reinforced that thought, that the activities that passengers have never practiced and those with numerous complicated safety instructions, make it difficult for passengers to understand how to use safety equipment. Therefore, if there were to come a time to use

them, the majority of passengers would not be able to wear them correctly. These two devices were not only rated lower by respondents who had watched the video safety demonstration, but also by people who had watched either a recorded audio presentation or a live safety demonstration.

The second most effective method in presenting safety information was the live safety demonstration. Several airlines which use the live safety demonstration have changed the pattern of presentation from the normal safety demonstration to the safety demonstration by dancing or singing (“Safety - no laughing matter?,” 2013). In “Daly Mail Reporter, online” (2010), it was report that Cebu Pacific Airlines performed the in-flight safety demonstration by dancing to Lady Gaga in order to stimulate passengers’ attention toward the safety demonstration. Moreover, Southwest Airlines attracts the attention of passengers on board as flight attendants rap the pre-flight safety instructions (McFadden, 2013). This corresponds to the statement of Parker (2006) that creating positive attitudes plays an essential role in passenger perceptions toward the safety information. The experiment discussed in “Safety - no laughing matter?,” (2013), reinforced that people who received safety messages in a fun and entertaining way were more effective at remembering the key safety information. Turning to consider the recorded audio presentation, respondents indicated fairly high levels of perceived ability in using safety equipment, just slightly below live briefings. The lowest areas were once again oxygen mask and life vest operation.

In summary, presenting safety instructions by a recorded audio presentation, a live safety briefing, and a video safety demonstration were not much different with regards to the ability of passenger to recall safety messages, because the average of

respondents' rating of their understanding of using the safety equipment was nearly the same.

Recommendations toward Cabin Safety Demonstration

To increase passengers' attention toward cabin safety demonstration, there were many qualitative opinions expressed by respondents. Several opinions urged using humor to capture passenger's attention, like Southwest Airlines does. The majority of people agreed that flight attendants, who are an important part of briefings, should perform their tasks with enthusiasm. When they start doing a safety demonstration, they need to feel happy about their responsibility, speak slowly, avoid monotone voices, and use less jargon. In other word, airlines need to find ways to surprise passengers with changes in the usual monotone delivery of safety demonstrations. Some people recommended that "flight attendants should use eye contact with passengers, not the seats of an airplane." With this action, respondents believed the attention could be drawn from passengers on board an airplane. Moreover, letting passengers engage in the safety demonstration could encourage attention from them in seeing the importance of safety equipment on an airplane. Adding more demonstrators in each aircraft would be another way to make everybody on an airplane see a safety demonstration thoroughly, and it could improve the effectiveness of safety briefings. Additionally, to draw passengers' attention to the cabin safety demonstration, flight attendants should increase passenger attention by flashing the cabin light or repeating chimes, singing, or dancing.

For frequent flyers, many respondents suggested that an airline should not start the safety demonstration with the operation of seatbelt, and there were also some people who recommended that airlines should stop telling passengers to use the seatbelt because

they have already know how to use it. On the contrary, they should start the demonstration with emergency exits, then the operation of oxygen masks, life vests, and the different types of flotation devices. This was because these are equipment that are less utilized and not the same on all aircraft. Thus, the new safety equipment presented on an airplane would draw attention from a lot of passengers. Moreover, some people advised that an air carrier should alter the pattern of safety demonstrations or combine the video and live safety demonstration to stimulate passengers' interested in the safety instructions. Additionally, flight attendants should present more actual reasons behind the safety instructions so as to increase passengers' confidence in cabin safety.

For the video safety demonstration, not only should an airline change the form of the video presentation every month like Delta Airlines, but it also should set a video screen on the back of each passenger's seat. This method could help people who sit far away from the main screen have their own personal screen to watch the cabin safety demonstration. Moreover, for passengers preferring to set in an emergency exit, many respondents suggested that exit row passengers should be instructed and trained. Airlines could develop a program for passengers who are interested in sitting in an emergency exit and who are willing to help passengers out of an aircraft. Then, people who completed the training would be only the passengers allowed to sit in the exit row.

Limitations of Research

While the interest of the study was to capture the perceptions of Tennessee residents who have flown commercially in the last year, there was no way to efficiently capture this population. Thus, the faculty/staff, Aerospace students, and international students at Middle Tennessee State University were the focus group that the researcher

used to participate in this research project. Since these participants are likely to be higher educated and more affluent than the general population, the results may not be the same had the entire population been surveyed.

Research Recommendations and Future Study

One recommendation to be implemented for a future study would be to have experimentation or conduct the survey in an airport. These two suggestions would help the results of the research have more accuracy. This experiment would help the researcher measure passengers' understanding of the safety briefings in the real environment. After watching the safety demonstration, some emergency situations could be set to evaluate passengers' behavior, or survey would be used to test their understanding. For example, low pressurization in the cabin would be set as an emergency situation, which would be used to assess the understanding of passengers in using the oxygen mask. The result of their experimentation would not only help to evaluate the potential of passengers in using the safety equipment on board an aircraft and measure their understanding after watching the safety briefings, but also the test results could be used to analyze the efficiency of each safety briefing. This is because the experiment could be designed to make a group of passengers watch the three different safety briefings and use simulation to assess the result. However, this method would require more budget to conduct the experiment, and would require cooperation from the airlines to be able to collect data in the airline simulations.

As for conducting the survey at an airport, this might be another option that could make the results of the research more accurate. The questionnaires could be distributed in the baggage claim area so that passengers would be willing to participate in the survey.

Since they would have just perceived the safety demonstrations on board an aircraft, these passengers may be able to better reflect on the safety briefings that they have just seen. With this procedure, information collected from passengers at an airport might be more effective for data analysis.

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APPENDICES

APPENDIX A

IRB Approval Letter



8/29/2014

Investigator(s): Ratchada Ruenruoy, Dr. Paul Craig
Department: Aerospace
Investigator(s) Email Address: rr3m@mtmail.mtsu.edu; paul.craig@mtsu.edu

Protocol Title: Passengers' Perception toward the Safety Demonstration on Board An Aircraft

Protocol Number: #15-036

Dear Investigator(s),

Your study has been designated to be exempt. The exemption is pursuant to 45 CFR 46.101(b)(2) Educational Tests, Surveys, Interviews, or Observations.

We will contact you annually on the status of your project. If it is completed, we will close it out of our system. You do not need to complete a progress report and you will not need to complete a final report. It is important to note that your study is approved for the life of the project and does not have an expiration date.

The following changes must be reported to the Office of Compliance before they are initiated:

- Adding new subject population
- Adding a new investigator
- Adding new procedures (e.g., new survey; new questions to your survey)
- A change in funding source
- Any change that makes the study no longer eligible for exemption.

The following changes do not need to be reported to the Office of Compliance:

- Editorial or administrative revisions to the consent or other study documents
- Increasing or decreasing the number of subjects from your proposed population

If you encounter any serious unanticipated problems to participants, or if you have any questions as you conduct your research, please do not hesitate to contact us.

Sincerely,

Lauren K. Qualls, Graduate Assistant
Office of Compliance
615-494-8918

APPENDIX B

Passenger Briefing Survey

You are being asked to participate in a research project regarding “Passengers’ Perception toward the Safety Demonstration On Board an Aircraft” by completing a brief survey. There are no foreseeable risks or immediate benefits, but your responses will remain confidential. Your participation as a subject is completely voluntary and you may withdraw at any time. If you have any questions or concerns, please contact Ms. Ratchada Ruenruoy at rr3m@mtmail.mtsu.edu. By continuing on you provide consent to participate in this research project.

Demographic Information: Please circle your response.

Gender: Male Female Other

Age: Under 18 years old 18-30 years old 31-45 years old 46 years or older

Highest Level of Education Completed:

High School Master Degree

Associate Degree Doctoral Degree

Bachelor Degree

How often do you use air transportation?

More than 5 times a year 3-5 times a year

1-2 times a year Every few years

Have you flown in the last year?

Yes

No

For the following questions, please rate each questions by marking in the table and using the following scale:

1) Strongly Disagree 2) Disagree 3) Neutral 4) Agree 5) Strongly Agree

Passengers' Perception		Rating Scale				
		1	2	3	4	5
1.1	Watching the cabin safety demonstration before the aircraft takeoff is important for passengers.					
1.2	Watching the cabin safety demonstration can help passengers follow the cabin safety instructions correctly.					
1.3	Watching the cabin safety demonstration can increase passenger confidence in the aircraft safety.					
1.4	The cabin safety demonstration needs to be improved in order to attract passengers' attention.					
1.5	Passengers need to know and understand the cabin safety equipment.					

Have you seen a recorded audio presentation on a small aircraft within the last year? If yes, please respond to the following questions by marking in the table and using the following scale: 1) Poor 2) Fair 3) OK 4) Good 5) Very Good

Recorded Audio Presentation		Rating Scale				
		1	2	3	4	5
2.1	How well did the safety briefings that you have perceived attract and keep passengers' attention?					
2.2	How well did the safety briefings that you have perceived educate your understanding the safety instructions?					
2.3	How clear and audible was the safety demonstration?					

After watching a recorded audio presentation, do you feel can you follow the safety instructions provided? Please rate each question by marking in the table and using the following scale: 1) No at all 2) Not very well 3) Some 4) Fairly well 5) Completely

Recorded Audio Presentation		Rating Scale				
		1	2	3	4	5
3.1	You can use the seat belt correctly.					
3.2	You can use the oxygen mask if it becomes necessary to do so.					
3.3	You can use the live vest if it becomes necessary to do so.					
3.4	You can identify the nearest emergency exit.					
3.5	You can indicate the location of the safety card containing additional documentation on safety procedures.					

Have you seen a live safety demonstration on board an aircraft within the last year?

If yes, please respond to the following questions by marking in the table and

using the following scale: 1) Poor 2) Fair 3) OK 4) Good 5) Very Good

Live Safety Demonstration		Rating Scale				
		1	2	3	4	5
2.1	How well did the safety briefings that you have perceived attract and keep passengers' attention?					
2.2	How well did the safety briefings that you have perceived educate your understanding the safety instructions?					
2.3	How clear and audible was the safety demonstration?					

After watching a live safety demonstration, do you feel can you follow the safety instructions provided? Please rate each question by marking in the table and using the following scale: 1) No at all 2) Not very well 3) Some 4) Fairly well 5) Completely

Live Safety Demonstration		Rating Scale				
		1	2	3	4	5
3.1	You can use the seat belt correctly.					
3.2	You can use the oxygen mask if it becomes necessary to do so.					
3.3	You can use the live vest if it becomes necessary to do so.					
3.4	You can identify the nearest emergency exit.					
3.5	You can indicate the location of the safety card containing additional documentation on safety procedures.					

Have you seen a video safety demonstration on board an aircraft within the last year? If yes, please respond to the following questions by marking in the table and using the following scale: 1) Poor 2) Fair 3) OK 4) Good 5) Very Good

Video Safety Demonstration		Rating Scale				
		1	2	3	4	5
2.1	How well did the safety briefings that you have perceived attract and keep passengers' attention?					
2.2	How well did the safety briefings that you have perceived educate your understanding the safety instructions?					
2.3	How clear and audible was the safety demonstration?					

After watching a video safety demonstration, do you feel can you follow the safety instructions provided? Please rate each question by marking in the table and using the following scale: 1) No at all 2) Not very well 3) Some 4) Fairly well 5) Completely

Video Safety Demonstration		Rating Scale				
		1	2	3	4	5
3.1	You can use the seat belt correctly.					
3.2	You can use the oxygen mask if it becomes necessary to do so.					
3.3	You can use the live vest if it becomes necessary to do so.					
3.4	You can identify the nearest emergency exit.					
3.5	You can indicate the location of the safety card containing additional documentation on safety procedures.					

3.6 Which method of safety demonstrations have you seen in the past? Please mark **in the appropriate box. (You may select more than one)**

- Live Safety Demonstration
- Video Safety Demonstration
- Recorded Presentation on smaller regional aircraft
- Other methods (please specify) _____

3.7 Which method do you prefer to watch the safety demonstration on board?**Please mark in the appropriate box.**

- Live Safety Demonstration
- Video Safety Demonstration
- Recorded Presentation on smaller regional aircraft

Do you have any recommendations or suggestions for increasing the effectiveness of safety demonstrations on board aircraft?
