



Coming To Grips With Panic

A passenger sitting quietly in a seat, or one passenger threatening to harm another passenger, may be examples of panic that can occur in an aviation accident. Information and leadership are key ingredients in reducing panic, and the cabin crew should be prepared to provide them.

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by

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The word “panic” is derived from Pan, a mythological Greek god of the woods and shepherds who had the body of a man with goat’s feet and large horns (1). Legend says, “sounds heard by night on mountains and in valleys were attributed to Pan, and hence he was reputed to be the cause of any sudden and groundless fear (2).”

Panic has come to imply an overwhelming fear that spreads quickly through a crowd, creating chaos. A “panicky person” conjures up the image of someone whose behavior is counterproductive and presents a danger to that person and others.

A careful look at human behavior in life threatening situations reveals that the perception of panic is not always accurate. Based on National Opinion Research Center (NORC) interviews of hundreds of survivors of disasters such as plane crashes, hotel fires and mine explosions, a different picture of panic emerges.

Quarentelli, NORC investigator and expert on the psychological aspects of behavior in disaster situations, discovered that panic flight has the following characteristics (3):

Panic flight is always in a direction away from the danger. In the presence of overwhelming danger, fleeing is often the most effective action possible. Panicky people may run, swim or crawl with little loss of coordination.

Panic flight is not random. At least two factors help determine the specific direction:

1. Habit or recently performed behavior, tends to lead aircraft passengers toward the same door through which they boarded, for example.

2. Passengers are likely to move in the direction that others are going.

Panic flight is nonsocial in nature. The strongest social bonds may be temporarily broken; mothers may leave their infants. Some persons may injure or kill others in an effort to survive, in spite of the possible consequences of their actions.

The panicked person is capable of conscious thought. The person continually evaluates the situation and is at least partially aware of the actions of others.

The panicked person’s thinking is at a low level, but it is not irrational. While flight from danger may be the appropriate response, the panicked person does not seek a range of solutions, such as searching for alternate exits.

It is evident that panic flight may increase a passenger’s chances of survival in a life threatening situation. Such behavior, however, can also be counterproductive if it interferes with the evacuation of passengers through a limited number of exits.

A Saudia Airlines L-1011, with 301 persons on board, made an emergency landing in Riyadh, Saudi Arabia, August 19, 1980, after reporting an inflight fire, that was later determined to have originated in the cargo area (4). The L-1011 landed safely then

turned onto a taxiway and stopped. None of the emergency exits were opened. The rescue crew finally managed to open a door from the outside and found the cabin filled with smoke and everyone dead, apparently as a result of toxic fumes. The passengers were found heavily concentrated at the forward exits.

Keep Passengers Informed

Lack of information is one of the greatest causes of fear and ultimately panic. An L-1011, carrying 260 passengers, was taking off from La Guardia Airport in New York, U.S., December 17, 1982, when some passengers observed a “burst of flame” from one of the engines during the takeoff roll. The flames were caused by excess fuel in the engine and presented no safety threat.

An airline spokesman said, “Unfortunately a couple of passengers noticed it and nervous types started yelling and screaming. A couple of passengers got everybody else so concerned that they brought the plane back to the gate.”

Airline personnel tried to reassure the passengers that there was no danger but thirty passengers refused to reboard the aircraft (5).

Passengers should be informed if a situation arises that may affect their safety. Janu and Mann have studied the question of how to warn people of a threat so they react in an appropriate manner (6). Their research revealed that an individual is more likely to heed a warning if:

1. Crewmembers giving the warning appear knowledgeable and truthful.
2. Passenger receiving the warning believes that the suggested action will provide protection from the risk.

Give Passengers Responsibility

Accident investigation has shown that passengers who are given evacuation duties are less likely to panic. On June 2, 1983, an Air Canada DC-9 was forced to make an emergency landing at the Greater Cincinnati International Airport in Covington, Kentucky, U.S., after the crew discovered an inflight fire in the aft lavatory. Exactly half of the 46 occupants on board safely evacuated the aircraft, The other half died from the effects of the fire after the aircraft landed.

Eighty percent of the passengers who received specific evacuation instructions survived as compared with 43 percent of the passenger population. [For detailed account of survival factors in this accident see FSF Flight Safety Digest, July and August 1984.]

In a “planned emergency” the likelihood of mass panic could be

greatly reduced if some passengers were given detailed instruction on the operation of the exits and the other passengers were given the responsibility of assisting one another during the emergency.

Educate Passengers on the Location and Operation of Exits

Most major U.S. air carriers require flight attendants to point to the location of exits during the pre-departure safety announcement. There is no U.S. Federal Aviation Regulation (FAR), however, requiring that the exits be physically identified by the flight attendants. The U.S. Federal Aviation Administration (FAA) does require that the location and operation of exits be illustrated on safety information cards (7).

U.S. National Transportation Safety Board (NTSB) accident reports, special studies and related safety recommendations, “have shown that the present means of conveying information on the use of safety equipment are not entirely effective.” Numerous NTSB recommendations for improving passenger safety education have been generated from an NTSB Special Study entitled, “Airline Passenger Safety Education: A Review of Methods Used to Present Safety Information” (8).

Negative Panic Generates Little Action

A curious and perhaps more common passenger response to an aircraft emergency is to do little or nothing to escape a life threatening situation.

One of the most dramatic examples of negative panic occurred during the collision of a Pan American World Airways B-747 and a KLM Royal Dutch Airline B-747 at Los Rodeos Airport, Tenerife, Canary Islands, March 27, 1977. The KLM crew believed it had been given takeoff clearance and struck the Pan Am airliner that had been instructed to taxi down the same runway. All 248 people on board the KLM aircraft were killed. Only 61 of the 396 on board the Pan Am aircraft survived, making this the worst aviation accident in history (10).

Dr. Daniel Johnson, a human factors psychologist, interviewed several survivors of the Tenerife accident. The following is Dr. Johnson’s account of an interview with two survivors (names are changed) (11):

To Mr. and Mrs. Able, both around seventy years of age, the impact did not feel too severe. They remember being thrown against the seats in front, yet right after the impact they remembered “columns of fire” dropping down inside the cabin. (This fire could have been the result of fuel lost by the KLM aircraft that unsuccessfully tried to takeoff, shearing off a large section of the taxiing Pan Am aircraft.)

The Ables had not seen the other plane, nor did they know what

seen the other plane, nor did they know what had happened. Someone screamed, "We've been bombed!" After a moment, Mr. Able got up and started toward the exit. As he left his seat he told his wife "Follow Me!" At first Mrs. Able sat in her seat, doing nothing. She later remembered thinking, "This is it."

She thought she was going to die but she was not afraid. And though religious, she did not pray. Nor did she have any thoughts of escaping. She says she was in a daze, but after Mr. Able yelled, "Follow me!" She got out of her seat and moved into the aisle.

The Ables were traveling with another couple, the Hansens, who were seated directly across the aisle from them. As Mrs. Able left her seat, she remembers seeing Mrs. Hansen sitting, hands folded in her lap, mouth slightly open, looking straight ahead. She doesn't remember looking at Mr. Hansen, although she knows he was there. But neither of them moved. She thinks that if she had yelled she could have roused her friends, but it never occurred to her to do so. As they headed toward the door they saw most of the other passengers sitting in their seats, just as the Hansens were. Apparently many of the people, at least in this section of the aircraft were behaviorally inactive.

More Persons Could Have Survived

Dr. Johnson explained, "The Ables said that many more people could have survived this accident had they simply moved from their seats and gone to the exits. Mrs. Able felt that she would have died had it not been for her husband telling her to follow. They both agreed that a major reason for their survival was the attention they paid to the flight attendant's briefing and to the safety information card before the accident."

Training And Leadership Increase Survival Opportunities

Research into the phenomenon of negative panic or behavioral inaction suggests that practice prior to an emergency, and leadership, can increase the incidence of quick and correct actions (9).

Mentally practicing evacuation procedures, such as the location and operation of the closest exits, will help to counter negative panic. For example, Mr. Able walked around the aircraft with his wife, locating the emergency exits, before taking his seat. He also paid close attention to the flight attendant's predeparture announcement, and studied the safety card. Mr. Able's preoccupation with safety stemmed from an experience in his youth when he was caught in a panic stampede for exits during a theater fire.

If a passenger has taken the necessary steps to mentally prepare for an accident by studying the safety information card, listening to the briefing and locating the exits, behavioral inaction, or panic flight, is less likely to occur.

Action Backed by Leadership

The importance of leadership is also illustrated in the Tenerife accident. Mrs. Able was not as mentally prepared for an emergency as her husband. Subsequently, she experienced negative panic when the emergency occurred. Mr. Able provided the necessary leadership when he gave her the command, "Follow me!"

Crew leadership is a vital element in controlling panic. The NTSB reports: "The factor which most affects the success of an aircraft emergency evacuation is the role played by trained professional crew. Without their contribution to the control of panic and the smooth movement of passengers the situation will become increasingly dangerous (12)."

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