IDENTIFICATION, DESCRIPTION, AND CATEGORIZATION OF INCIDENTS OF CABIN CREW INTERFERENCE ABOARD U.S. AIR CARRIERS

By

PAULA DIAN TAYLOR

Bachelor of Science in Education
University of Oklahoma
Norman, Oklahoma
1981

Master of Education
University of Oklahoma
Norman, Oklahoma
1991

Submitted to the Faculty of the
Graduate College of
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
DOCTOR OF EDUCATION
May, 2000

IDENTIFICATION, DESCRIPTION, AND

CATEGORIZATION OF INCIDENTS OF

CABIN CREW INTERFERENCE

ABOARD U.S. AIR CARRIERS

Thesis Approved:

Thesis Adviser

Dean of the Graduate College

ACKNOWLEDGMENTS

I wish to express my appreciation to the many people who made this work possible. I am sincerely grateful to Dr. H.C. "Mac" McClure for his encouragement and expert guidance which kept me motivated and on track throughout my academic studies. My appreciation also goes to the members of my doctoral advisory committee: Dr. Steven Marks, Dr. Ray Hamilton, Dr. Cecil Dugger, and Dr. Kevin Hayes, who offered support, direction, and wise counsel during this study.

A very special thanks goes to Dr. Mary Kutz who encouraged me to begin and complete my degree, and who listened and offered advice. Her friendship and encouragement has been invaluable throughout my academic endeavors.

I further wish to express my thanks and appreciation to my daughters, Shannon, Gabrielle, and Vanessa, who have tolerated, with patience, my busy schedule during the completion of this study.

This dissertation would not have been possible without the continual love, support, understanding, advice, and untold sacrifice of my husband, Terry. His calm reassurance and encouragement have been both an inspiration and a blessing.

TABLE OF CONTENTS

Chapter Page

LIST OF TABLES

CHAPTER I

INTRODUCTION

Pilots and flight attendants, as well as the whole of the aviation industry, have become increasingly concerned with airline passengers who interfere with crewmembers performing their duties. These incidents range from mild harassment to physical assault, from simple nuisances to potentially life threatening situations. Notably, the FAA has reported a total of 1,166 cases of crewmember interference from 1994 to mid year 1999 (Association of Flight Attendants, [AFA],1999). These incidents of passenger disruption and violence aboard commercial aircraft have received extraordinary attention in newspapers, television, and other media outlets. A number of high profile accounts from crewmembers have fueled public and industry interest, and have left air carriers, law enforcement, and governments scrambling for answers and solutions.

Whenever there is a threat to safety in an aircraft cabin environment, cabin crew have characteristically been the critical link to maintaining passenger safety. Their day-to-day experiences in dealing with passengers and other crewmembers have equipped them with expert knowledge in recognizing and defusing potentially dangerous situations. Yet, little research has been done to obtain the perspectives of cabin crewmembers as to the situation-specific conditions and factors associated with actual incidents of passenger misconduct. The first-hand knowledge and perceptions of those crewmembers, who have

been the victims of these types of incidents, offer a valuable source of information that must be tapped.

There is an old adage that those who are unfamiliar with the mistakes of the past are doomed to repeat them (Wiersma, 2000). Any improvement or change in regard to incidents of crewmember interference must be viewed in the light of past events. Thus, research which analyzes past occurrences looking for situation-specific patterns or relationships of actual events can serve as the groundwork for knowledge to eliminate present and future occurrences.

Statement of the Problem

Little research has been done to analyze the situation-specific conditions and factors associated with actual incidents of crewmember interference. By analyzing narrative first-hand reports submitted by cabin crewmembers to the National Aeronautics and Space Administration Aviation Safety Reporting System (ASRS), insight can be gained into the situation-specific conditions and factors associated with actual incidents of crewmember interference. Furthermore, no study has attempted to identify, describe, and categorize these conditions and factors in relation to *categories of passenger misconduct* defined by FAA Advisory Circular AC 120-65 (FAA, 1996).

The identification, description, and categorization of these situation-specific conditions and factors can be used as a basis for extending knowledge of what caused past incidents and, ultimately, assist in making informed decisions to reduce current and future trends of passenger misconduct.

Purpose of the Study

As often is the case when scant research exists on a topic, when numerous variables are unknown, and when a relevant theory base is inadequate, incomplete, or missing, a qualitative research design can help define what is important, that is, what requires further study (Ertmer, 1997).

The purpose of this study was to analyze narrative reports submitted by cabin crewmembers to the ASRS from 1994 to 1999, to gain insight into the situation-specific conditions and factors associated with actual incidents of crewmember interference. Furthermore, this study sought to identify, describe, and categorize these conditions and factors into specific *categories of passenger misconduct* defined in FAA Advisory Circular AC 120-65. The identification, description, and categorization of these situation-specific conditions and factors can be used as a basis for extending knowledge of what caused past incidents and, ultimately, assist in making informed decisions to reduce current and future trends of passenger misconduct.

This study sought to analyze data collected from actual reports of cabin crew interference over a period of time from the point of view of the flight crew for three reasons: (a) to serve as a base for extrapolating and extending knowledge of past occurrences of passenger misconduct, (b) to identify relationships and patterns in the data which require further study, and (c) to assist the airline industry and the Federal Aviation Administration (FAA) in making informed decisions to reduce trends in crewmember interference and, thereby, increase the safety and integrity of air cabin and flight operations within the United States.

Research Objectives

The following research objectives guided this study:

1. Describe crewmember interference and how it is categorized by the Federal Aviation Administration (FAA).
2. Identify and list in chronological order the key regulatory requirements applicable to crewmember interference.
3. Analyze Cabin Crew Reports (NASA ARC 277Cs) submitted to the NASA Aviation Safety Reporting System (ASRS) in the time period of January 1, 1994 to August 23, 1999, to determine number of deliberate violations of Title 14 Code of Federal Regulations (14 CFR) section 91.11.
4. Identify and describe situation-specific conditions and factors of each reported event of crewmember interference to include: (a) factors which contributed to or caused the incident, (b) gender of passenger who initiated each incident, (c) model and type of aircraft on which each incident occurred, (d) phase of the flight in which incidents most frequently occurred, (e) business class versus coach seating, and (f) individuals traveling alone versus in a group.
5. Categorize and compare reported factors which contributed to or caused an incident in accordance with each of three established *categories of passenger misconduct* defined in FAA Advisory Circular AC 120-65.
6. Determine significant relationships or patterns resulting from categorization and comparisons of reported data.

Assumptions

For the purposes of the study, the following assumptions were made:

1. Human behaviors are best understood in a real-world context that is not subject to experimental designs or constructs.
2. Because this study concerned the analysis and interpretation of past events, the acquisition of records of the period under study were necessary sources of information.
3. Purposeful criterion sampling was preferred to random sampling because it brought to light a wider range of reported cases, the extremes of which were of particular interest to the study.
4. The use of primary source data, in the form of reports submitted to the National Aeronautics and Space Administration's Aviation Safety Reporting System (ASRS) database, helped ensure the integrity of this study and strengthened its reliability.
5. Crewmembers who were witnesses or observers of incidents of cabin crew interference were able to report what they observed and could provide valuable information about the conditions and factors causing or contributing to incidents.
6. Statistical and narrative information obtained from the ASRS database provided an accurate account of the crewmember's recall, description, and interpretation of events.
7. ASRS reports were de-identified to ensure confidentiality of the individual who submitted the report.

Limitations

The ASRS database of reports concerning a specific aviation topic or situation was not used to infer the prevalence of that problem within the whole of the National Airspace System (NAS). Furthermore, primary information provided by cabin crewmembers in these reports represented the perception of specific individuals who may or may not have understood or been privilege to all the factors that contributed to an event. Therefore reporting biases may exist based on the perceptions or attitudes of crewmembers. However, the purpose of this study was not to confirm whether crewmember perceptions were accurate or true reflections of a situation but rather to ensure that the research findings accurately reflected those reported perceptions and interpretations of actual events.

Information provided by ASRS database reports did not represent the entirety of incidents which occurred aboard United States air carriers between 1994 and 1999, but rather only incidents reported by cabin crewmembers. These reports represented the lower measure of the true number of such occurrences. Because of statistical limitations in the data, this study relied heavily on data derived from report narratives submitted by cabin crewmembers.

Although there were four reporting forms available for completion, only form NASA ARC 277C was used to glean information for the purposes of this study. This reporting form was specifically designed and developed in 1994 by the Federal Aviation Administration (FAA) and the National Aeronautics and Space Administration (NASA) to be used by cabin crewmembers as a way of submitting reports to the ASRS. Because of

the newness of the form during its inception in 1994, incidents during that time frame were under reported.

All ASRS report processing systems were designed to protect identifying information submitted by crewmembers, such as names, company affiliations, and specific times of incident occurrence.

Informational data obtained for the purposes of this study, as to the conditions and factors which contributed to incidents of crewmember interference, did not include personal interviews or primary source narratives from the airline passenger or pilot-in-command involved in the incident.

Although corroborative reports may have been submitted to the Association of Flight Attendants or the employing airline of crewmembers, these reports were not publicly available for analysis or research purposes.

Federal Aviation Administration incident reports, although publicly available through the Federal Incident Data System (FIDS), are not ordinarily submitted by cabin crewmembers. In addition, FAA Incident Reports did not contain comprehensive narrative data explicitly describing conditions or factors which caused or contributed to actual events of crewmember interference.

Definition of Terms

The following definitions of terms are furnished to provide, as accurately as possible, clear and concise meanings of terminology used in this study:

- Association of Flight Attendants (AFA) - world's largest labor union organized by flight attendants in 1945. AFA represents over 47,000 flight attendants at 26

airlines. Their primary function is to negotiate better pay, benefits, working conditions and regulations at airlines, and to improve safety on the job.

- Aviation Safety Reporting System (ASRS) - a database created in 1976 by the Federal Aviation Administration (FAA) and the National Aeronautics and Space Administration (NASA) to solicit incident reports from any aviation professional source. The purpose of the ASRS is to receive, process, and analyze reports of aviation incidents voluntarily submitted by participants or observers of the incident. During its inception, the FAA determined that the effectiveness of the ASRS would be enhanced if the receipt, processing, and analysis of raw data were conducted by NASA rather than the FAA.
- Axial coding - a set of procedures whereby data are put back together after open coding by making connections between categories (Strauss & Corbin, 1990).
- Cabin crewmember - any individual, either male or female, who, in accordance with their job-related responsibilities and airline appointed duties aboard a passenger carrying aircraft, performs vital safety and comfort functions for the flying public.
- Categories of passenger misconduct - any of the three occurrences outlined in accordance with FAA Advisory Circular AC 120-65 and/or the Federal Aviation Administration's Civil Aviation Security's *Guidance for Air Carrier Personnel* (1996) depicting categories of passenger misconduct. (1) Category 1 is defined as occurrence involving an airline passenger who is a problem because of verbal abuse. This verbal abuse may include intimidating or threatening a crewmember. (2) Category 2 is defined as an occurrence involving a passenger who refuses to

comply with instructions or warnings given by a crewmember causing the pilot or other flight crew to get involved (without leaving the cockpit). (3) Category 3 is defined as an occurrence which involves a passenger's obvious violation of the Federal Aviation Regulations (FAR). A Category 3 incident is considered a serious violation of the safety of the flight, resulting in the need to involve law enforcement authorities. The following are considered automatic Category 3 disturbances:

1. Anytime a member of the cockpit crew must leave the cockpit to resolve a problem,
2. Whenever a physical confrontation (fight) takes place in the passenger cabin,
3. Unauthorized possession of weapons or contraband,
4. Any continued or aggressive disturbance involving alcohol or drugs, and
5. A breach of security (for example, bomb threats, hijacking, weapons, etc.)

- Crewmember interference - any intentional act by an airline passenger who for whatever reason purposefully assaults, threatens, intimidates, or interferes with a crewmember in the performance of the crewmember's job-related duties aboard a United States passenger carrying aircraft.
- Code of Federal Regulations - Federal statutes having the force and effect of law.
- Contributing conditions and factors - any extrinsic or intrinsic variable depicting the context, natural setting, or the interactions of other variables as a means of explaining, interpreting, or describing circumstances which either caused or contributed to an incident of crewmember interference.

- De-identification - process used by NASA's Aviation Safety Reporting System to protect the identity of the individual submitting a report whereby the top portion of the form is removed, time-stamped, and returned to the sender. This action removes the sender's identity from the report, provides proof that the report was submitted, and acts as a receipt to the individual submitting the report.
- Federal Aviation Administration (FAA) - United States government organization whose primary responsibility is the safety of civil aviation. The FAA's major functions include regulating civil aviation to promote safety and fulfill the requirements of national defense; encouraging the development of air commerce and civil aeronautics; developing and operating a common system of air traffic control and navigation for both civil and military aircraft; research and development with respect to the National Airspace System and civil aeronautics; developing and implementing programs to control aircraft noise and other environmental effects of civil aviation; certificating aircraft and airmen; and regulating U.S. commercial air space transportation.
- Federal Aviation Administration Advisory Circular AC-165-20 - document produced by the Federal Aviation Administration to provide information to air carriers, crewmembers, law enforcement officers, and the general public regarding methods which may be used to manage and reduce the instances of passenger interference with crewmembers. The circular defines three categories of passenger misconduct and suggests appropriate responses by crewmembers.
- Flight Attendant - synonymous with cabin crewmember. Any individual, either male or female, who, in accordance with their job-related responsibilities and

airline appointed duties aboard a passenger carrying aircraft, performs vital safety and comfort functions on a passenger carrying aircraft.

- National Aeronautics and Space Administration (NASA) - United States government organization responsible for aeronautics and space research. One of their responsibilities is to administer the Aviation Safety Reporting System (ASRS) for the FAA and the aviation community.
- NASA ARC 277C - a reporting form used specifically by cabin crewmembers to report and submit safety related occurrences aboard passenger carrying aircraft to the Aviation Safety Reporting System (ASRS). (See Appendix A).
- Open coding - method of organizing and reducing large quantities of descriptive data into specific categories. These categories commonly emerge from the researcher's analysis of the data itself by looking for regularity in words, phrases, and perceptions. The words used to describe a phenomenon often become coding categories (Wiersma, 2000).
- Passenger misconduct - any form of purposeful act, behavior, or obvious violation of Federal Aviation Regulation (FAR) 91.11, or any other safety violation that endangers the safety of a passenger carrying aircraft, and its crewmembers or other passengers.
- Purposeful sampling - a method of selecting all cases that meet some predetermined criteria of importance.
- Selective coding - process whereby a research selects core categories and systematically relates those to other categories to make comparisons and validate relationships of categories (Strauss & Corbin, 1990).

- Unruly or violent passenger - any member of the traveling public who purposefully assaults, threatens, intimidates, or interferes with a crewmember in the performance of the crewmember's duties aboard a passenger carrying aircraft (FAA, 1996).
- Workplace victimization - Any form of attack, abuse, intimidation, threat, or harassment initiated by a customer (passenger) and directed toward workers (crewmembers) performing their duties in their daily working environment.

Scope of the Study

This study analyzed 300 reports submitted by cabin crewmembers who performed job related duties aboard United States passenger carrying aircraft between the years of 1994 to 1999. This study sought to analyze cabin crew reports, NASA ARC 277Cs, which were submitted to the National Aeronautics and Space Administration Aviation Safety Reporting System (ASRS) describing actual events of crewmember interference between January 1, 1994, and August 23, 1999.

A purposeful sampling strategy was used as this study sought to understand and gain insight in select cases in their own right rather than to generalize results to a population, as would be the case in random or representative sampling (Isaac & Michael, 1997).

The criteria used to select this sampling was that: (a) the ASRS reports were primary source documents which represented high quality, detailed descriptions of incidents submitted by cabin crew who were either actual participants or direct observers of an event, and were submitted at the time the event occurred; (b) the ASRS reports were

the only publicly available primary source documents specifically developed by the Federal Aviation Administration (FAA), in cooperation with the National Aeronautics and Space Administration (NASA), for use by cabin crewmembers to report safety violations aboard passenger carrying aircraft; and (c) these reports represented the time period from the 1994 inception of the cabin crew report to the present.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Statistical data obtained from the Federal Aviation Administration and the airline industry indicate that episodes of crewmember interference have escalated aboard United States air carriers. Air cabin crewmembers are both witnessing and falling victim to the violent passenger who either intimidates, assaults, threatens, or interferes with cabin crewmembers during the performance of their job-related duties.

The purpose of this study was to analyze the narrative reports of cabin crewmembers submitted to the Aviation Safety Reporting System (ASRS) from 1994 to 1999 to provide insight into the situation-specific conditions and factors associated with actual incidents of crewmember interference on United States air carriers. Furthermore, the study sought to identify, describe, and categorize these conditions and factors in relation to specific *categories of passenger misconduct* defined in FAA Advisory Circular AC 120-65.

The review of the literature is divided into categories which related both directly and indirectly to the problem and established the need for this study. The categories included in the literature review were: (a) background of the problem, (b) anecdotal incidents of crewmember interference, (c) chronological listing of applicable regulations and guidance, (d) current and proposed initiatives to reduce crewmember interference,

(e) National Aeronautics and Space Administration Aviation Safety Reporting System (ASRS), (f) theories of airline passenger misconduct, (g) aggression and violence, (h) occupational violence, and (i) impact of workplace victimization on cabin crewmembers.

Background of the Problem

Evidence of an increased incidence of passenger violence and misconduct was reflected in published statistical data. According to the Association of Flight Attendants (1999), a total of 1,166 cases of crewmember interference were reported from 1994 to 1999. One report revealed that in the first three months of 1998, one of the largest U.S. air carriers reported 258 incidents in which passengers interfered with the duties of a cabin attendant or flight crew member. Sixty-three of those 258 incidents involved physical actions. Research from flight attendant unions, airlines, and NASA's Aviation Safety Reporting System (ASRS) database further confirmed this trend in passenger misconduct. The Association of Flight Attendants, AFL-CIO, which represents more than 46,000 flight attendants at 25 airlines, received more reports of assaults against flight attendants between 1997 and 1999 than it had in the 55 year history of the Union (AFA, 1999). The AFA also asserted that the unruly passenger problem is of such a magnitude that airline insurance firms have offered carriers "interrupted flight insurance" to cover the cost of unscheduled landings caused by incidents of air rage. According to AFA reports, the average flight diversion currently costs approximately $90,000 per incident.

Cathay Pacific, a California based carrier, reported an increase from 168 passenger incidents in 1995 to 251 in 1996, a jump of more than 50% (Stevenson, 1997). American

Airlines reported 140 assaults in 1995, up from the 33 in 1994. American Airlines also reported a threefold increase (296 to 882) of in-flight disruptive passenger incidents from 1994 to 1995 (Borrillo, 1999). According to Darby, Orthmann, & Lofton (1997), United Airlines reported that the number of verbal and physical assaults increased from 77 to 94 during the same period. In addition, United Airlines noted an almost twofold increase from 226 to 404 between 1995 and 1996. Based on the entirety of incidents reported by all United States airlines, the numbers rose from 196 in 1994 to 921 in 1997 (Shepherd, 1998). David Fuscus, vice president of communications at America's Air Transport Association, maintained that there are at least 5,000 acts of passenger misconduct each year which go unreported (Sheffer, 1999).

According to an Official Airline Guide Business Travel Lifestyle Survey, nearly 40% of the world's business travelers have witnessed verbal or physical abuse during air travel in the past year. At least 2% reported that they had flights which were diverted as a direct result of "air rage" incidents. This survey polled nearly 3,000 of the most frequent business travelers from 13 countries across the globe. The business executives surveyed made, on the average, 21 business trips annually (OAG Worldwide, 1999).

According to Nelms (1998), the problem of passenger violence has not only grown but grown on an international scale. From 1997 to 1999, international incidents of air rage increased by 400% (Riding, 1998). Roger Collis (1998), journalist for the *International Herald Tribune*, noted that British Airways registered 266 incidents of disruptive behavior in 1997, including 17 cases where passengers were restrained with handcuffs. Collis also indicated that Cathay Pacific Airlines had estimated incidents of "sky rage" had risen by 400% since 1995. Other accounts provided by Lucas (1999),

Chairman of The British Air Line Pilots Association, disclosed that the two largest United Kingdom airlines had 587 incidents between them recorded on their internal reports in 1997. In addition, the Safety Information Exchange (SIE) database, covering over 100 airlines, contained 3000 incidents for the same period. In the *Journal of the British Airline Pilots' Association*, Lucas (1999) observed that the problem is considerably larger, as there has always been a reluctance by crews to submit incident reports.

In August of 1999, British Airways launched a yellow card warning system. According to one report (Dunham, 1999) the airline handed out notices telling offenders they could face arrest on landing and be liable for costs if their behavior forced the aircraft to divert to another airport. In addition, Britain's air rage problem has risen to the point that they have drawn up a blacklist of potentially deadly passengers to actively ban from flights worldwide.

A spokesperson for the German pilots' association indicated that a cockpit survey conducted in 1998 in Germany showed 1,252 cases of unruly passenger incidents aboard German airlines from January to June of that year. The spokesperson observed that as an extremely low percentage of cases were actually reported, the actual number may be between 80,000 and 100,000 (Loviglio, 1998).

Cabin Crew Safety reported an annual increase in passenger enplanements on United States airlines from 600 million passengers in 1997 to 900 million by the year 2010 with a parallel increase in abusive in-flight behavior from passengers (Darby, Orthmann & Loftin, 1997). In a bill entitled the *Airline Passenger Fairness Act* which was introduced into the Senate in February 1999, Congress estimated that the number of airline passengers would reach one billion by the year 2008 (S. 383, 1999). Accordingly, the

literature predicted that United States based airlines stand to see a significant increase in the amount of disruptive passenger behavior within the next few years (Stevenson, 1997). Post, a psychologist from George Washington University, predicted that passenger disruptions will increase by 50 % over the next decade and double by the year 2015 if the rate of current incidents remains constant (Stevenson, 1997).

Anecdotal Incidents

The amount of reported incidents related to crewmember interference was abundant in newspapers, television, and on-line reports from the Internet. This portion of the literature review provided limited anecdotal evidence of the existing problem and typified cases reported during the period of 1994 to 1999 on both foreign and domestic carriers.

The most publicized account of passenger violence in the United States occurred on a U.S. Airways flight which originated in Los Angeles, California. In December 1997, a U.S. Airways flight attendant was attacked by a passenger after the flight attendant asked the passenger to take a seat. When the passenger then attempted to enter the cockpit door to "bless the pilots," a struggle ensued in which the crewmember was kicked in the stomach, legs, and back. The passenger then tossed the attendant across three rows of seats and into an overhead compartment. It took four others to control the violent passenger while he fought and tried to bite those holding him. He then had to be restrained for the rest of the flight with seat belts, plastic handcuffs, and an airline necktie (Dunham, 1999).

According to an on-line report from *Road Kill Diaries* (Thompson, 1997), an Alabama man was charged with assaulting two Delta Airline flight attendants on a flight from Seoul, South Korea, to Portland, Oregon. He allegedly put his arm around a flight attendant and grabbed her undergarments during the flight. When a second flight attendant tried to intervene, the Alabama man grabbed her breast and hit her with a pillow.

On a United Airlines flight from Frankfurt, Germany, to Washington's Dulles International Airport, a passenger began to berate a flight attendant, insisting that the crew member had bumped him several times with the service cart. The passenger threw the attendant against an exit door and beat him on the head and face. It took three passengers to subdue the enraged passenger. Other incidents on United States airlines include British and Irish tourists having a food fight and a Saudi princess attacking a flight attendant she said hadn't served her a drink quickly enough (Finn, 1996).

In October 20, 1996, in a United first-class cabin flight between Buenos Aires and New York, a businessman assaulted a flight attendant, defecated on an in-flight service cart, and tracked feces throughout the plane (Reynolds, 1996).

An on-line source (Bethune, 1999) reported that an airline passenger was arrested in July 1997 on charges that he threw a Continental gate agent to the ground at Newark International Airport, breaking the agent's neck. The agent underwent surgery to fuse fractured vertebrae in his neck and was also treated for head injuries.

In Los Angeles, a couple pleaded innocent to federal charges that they poured hot coffee on two flight attendants and threatened to open emergency doors aboard a Continental Airline flight from Houston to Los Angeles (Reynolds, 1997).

On an Alaska Airlines jet traveling from Mexico to San Francisco, California, a 250 pound man shed his clothes, roamed the aisles, repeatedly switched seats, tried to open an exit door, and then stormed the cockpit of an MD-83. Once inside the cockpit, he screamed death threats and grabbed for the throttle and fuel controls. He was tackled by seven passengers who restrained him until crewmembers were able to put him in plastic handcuffs (Curtis, 2000).

According to a report from the International Conference on Disruptive Airline Passengers held in Washington, D.C. (1997), some passengers denied smoking privileges resort to violence. For example, on a nonsmoking American Airlines flight from Stockholm, Sweden, to Chicago, Illinois, two passengers refused to extinguish their cigarettes. The passengers became verbally abusive towards the crew members, and flex-handcuffs were used by the crew to restrain the passengers. The captain elected to divert to Montreal, Canada, where, upon landing, the passengers were taken into custody by the Royal Canadian Police. After remaining in jail there overnight, the two passengers were deported back to Sweden the next day.

According to the Chairman of the National Security Committee for the Air Line Pilots Association, passenger misconduct is currently the singular most pervasive security problem facing the aviation industry with thousands of events each year (Luckey, 1999).

Chronological Listing of Applicable Regulations and Guidance

1963

International statutes addressing passenger violence were initially put into effect to decrease the phenomenon of hijacking prevalent in the early 1960s (Kane, 1999).

An International Civil Aviation Organization convention (ICAO, 1963) held in Tokyo addressed "offenses and certain other acts committed aboard aircraft" during flight. The guidelines established by this convention were signed and agreed upon by some United Nations representatives and other specialized agencies. The primary intent of the guidelines was to address offenses and other acts which were contradictory to penal law or that jeopardized the safety of the aircraft, persons, or property therein, or which jeopardized order and discipline on board. This document gave the aircraft commander the authority, when necessary, based on his or her judgment, to impose reasonable measures including restraint necessary to:

(a) protect the safety of the aircraft, or of persons or property therein;

(b) maintain good order and discipline on board; or

(c) enable the delivery of such person to competent authorities or to disembark such person in accordance with the provisions of Chapter I, article 5 of the guidelines. Furthermore, the guidelines spelled out, in specific detail, jurisdiction and responsibilities of the state, powers and duties of the commander, as well as the concept of reasonable force.

Some authors (Kane, 1999) asserted that the guidelines established during the convention are the basis on which any discussion of the law related to disruptive and unruly passengers on board aircraft must be founded.

1971

In 1971, the international community added the Hague Convention for the Suppression of Unlawful Seizure of Aircraft to the existing guidelines of the Tokyo

Convention. The Hague Convention not only defined the offense of unlawful seizure, it also required that it be punishable by severe penalties. It also provided for commonly agreed methods of dealing with offenders who committed criminal acts (Kane, 1999).

1994

Beginning in 1994, criminal sanctions were imposed under the Federal Aviation Act for any individual who assaulted or intimidated a flight crewmember, and thereby interfered with the performance of their duties. This law was originally entitled 49 United States Civil Authority but was updated to Code of Federal Regulation Part 14 (CFR 14). Penalties under Title XVIII of the Act, which was originally called 49 U.S.C.A., included fines up to $10,000, imprisonment for not more than 20 years, or both. If a dangerous weapon was used in assaulting or intimidating a crewmember, this aggravated the act, and the individual could be imprisoned for any term of years, or life.

1996

Working with representatives from flight attendant unions, airlines, and FAA personnel, the FAA issued an Advisory Circular in October 1996 to air carriers, crewmembers, law enforcement officers, and the general public, which established guidelines for managing and reducing the instances of passenger interference with crewmembers (FAA, 1996). FAA Advisory Circular AC 120-65 (1996) recommended that specific actions be taken by crewmembers in the event any of three categories of passenger misconduct should occur. Furthermore, it encouraged air carriers to take a

number of steps to manage passenger misconduct including the issuance of warnings and the adoption of a zero tolerance policy.

In Appendix 1 of the FAA Advisory Circular 120-65, three distinct categories of passenger misconduct were described and defined: (a) A Category 1 occurrence involves a passenger(s) who is a problem because of verbal abuse. Verbal abuse may include intimidating or threatening a crewmember. The situation is handled by the crewmembers and does not involve law enforcement agencies. Therefore, it is not considered a major violation of the FAA regulations. Category 1 occurrences are resolved by crewmembers without help from the cockpit or intervention from any other source. (b) A Category 2 occurrence involves a passenger who refuses to comply with instructions or warnings given by a crewmember causing the pilot or other flight crewmembers to get involved (without leaving the cockpit). Category 2 occurrences may include smoking or failure to follow crewmember instructions. The literature indicates a Category 2 occurrence ordinarily requires additional investigation by the FAA Flight Standards Division. (c) A Category 3 occurrence involves a passenger's obvious violation of the Federal Aviation Regulations (FAR). A Category 3 incident is considered a serious violation of the safety of the flight, resulting in the need to involve law enforcement authorities. According to the AC 120-65, the following are automatic Category 3 disturbances: (a) anytime a member of the cockpit crew must leave the cockpit to resolve a problem, (b) whenever a physical confrontation (fight) takes place in the passenger cabin, (c) unauthorized possession of weapons or contraband, (d) any continued or aggressive disturbance involving alcohol or drugs, and (e) a breach of security (for example, stowaway, bomb threat, hijacking, weapon, etc.).

The statute (Title 49 USC 46504) established punishment (less than 20 years if unarmed; life if armed) for the disruptive passenger. However, federal law applied only to a closed door aircraft. If the door was still open and passengers were boarding, local police had jurisdiction (Borillo, 1999).

In addition to federal statutes, disruptive behavior by unruly passengers became a direct violation of FARs. These civil regulations, which are administered and enforced by the Federal Aviation Administration, have the force and effect of law. Title 14 of the Code of Federal Regulations (14 CFR) section 91.11 states:

> No person may assault, threaten, intimidate, or interfere with a crewmember in the performance of the crewmember's duties aboard an aircraft being operated.

In addition to these regulations, there are prohibitions against in-flight intoxication.

FAR 121.573 states:

> No airline may allow a person to board an aircraft if that person appears to be intoxicated. Additionally, no passenger may be served alcoholic beverages on board if they appear to be intoxicated.

A CNN report (1996) brought recommendations of a FAA advisory panel to public view. The panel recommended a complete overhaul of the airline security system. The proposed system included a database profiling process whereby making a plane reservation would trigger an instant profile of a passenger's background, including past travels and possible criminal history. The panel urged FAA certification of designated airport security workers and better training for airport and airline personnel. It also stressed the need for an increased use of bomb-sniffing dogs, the speedy installation of explosive-detection devices, and greater use of high-tech equipment. The advisory panel, made up of 23 industry, government, and public interest groups, suggested that the federal

government, not the airline industry, pay for the increased security measures. It estimated the proposals would cost $9.9 billion over a 10 year period. According to the CNN report, the Office of Management and Budget immediately objected to the funding request, saying there was not enough discretionary money.

1999

In February 1999, a Senate committee voted to boost the maximum civil penalty for unruly airline passengers from $1,100 to $10,000 per incident. The Clinton administration backed the move and House leaders also suggested that tougher penalties be imposed (Powelson, 1999).

Current and Proposed Initiatives

Nevada Senator Reid (1999), advocate for the Association of Flight Attendants, introduced a bill into the United States Senate in 1999 calling for stiffer penalties for people convicted of violent or unruly behavior while on an airline flight. The bill entitled the *Safe and Friendly Skies Act of 1999* (S. 1139, 1999) proposed to increase the civil penalty for such behavior from $1,100 up to no more than $25,000. The bill also proposed a one year flying ban on any passenger found guilty of crewmember interference. The legislation also opted to give the Secretary of Transportation the authority to ban from flying passengers found guilty of dangerous behavior. In addition, the bill proposed to give the Attorney General the authority to deputize local law enforcement officials to investigate such incidents as soon as the plane landed.

A similar bill, *Aviation Investment and Reform Act for the 21st Century* (H.R.1000, 1999) was introduced into the House. A subchapter included a "whistle blower" clause whereby no air carrier or contractor could discharge or otherwise discriminate against an airline employee with respect to compensation, terms, conditions, or privileges of employment because the employee has filed, or caused to be filed, any suit based on a violation of FAA regulations or air carrier safety regulations.

The International Transport Workers Federation (ITF) (1999), which represents more than 170,000 cabin crew, 85,000 check-in staff, and many thousands of airport security personnel around the world, recently indicated in an on-line report that the Legal Commission of the International Civil Aviation Organization (ICAO) had launched a study group in Montreal, Canada, in January 1999 to look at the problem of unruly passengers. According to the report, the study group was composed of legal experts and experts from international organizations who were members of ICAO representing the airlines, the pilots, and the cabin crew. The International Transport Workers Federation also reported that the ITF would conduct a world-wide survey of their cabin crewmembers concerning the issues of workplace violence and unruly passengers. A preliminary ITF survey conducted in 1997 found that few of its members received proper training for dealing with unruly passengers. Findings from this proposed study have, to date, not been published.

Subsequent reports by ITF (1999) indicated that the ICAO study group met in August 1999. The subject of that meeting was to ensure that all governments had national laws which gave them full jurisdictional authority over any passenger found guilty of unruly conduct on all flights. This preliminary meeting set the stage for the worldwide survey.

Strategies and Countermeasures

According to the literature, both foreign and domestic carriers have devised or are currently devising strategies and countermeasures to address passengers who intimidate, harass, or assault crewmembers during the performance of their duties. According to some sources (Powelson, 1999), Virgin Airlines is thinking of creating databases of difficult passengers and refusing to fly them; additionally, Japanese Airlines has instructed its attendants that it is permissible to tie up unruly passengers to subdue them and to put tape over their mouths if they will not be quiet. British Airways has started giving unruly passengers yellow warning cards telling them that if they don't behave, the pilot will land the plane and remove them. The airline could then charge the passenger for the extra cost of a diverted flight which has reportedly reached as much as $90,000 (Field, 1998).

Some major United States air carriers have equipped their flight crews with white plastic handcuffs to be used to restrain violent passengers (Field, 1998). Based on an on-line report from *Aviation Week* (Bethune,1999), Continental Airlines' Chief Executive suggested that Congress should ban passengers who harm airline employees from ever traveling on a United States airline again.

According to Riding (1998), surveillance cameras, which seem to be effective in other areas of society as a deterrent to crime, are under consideration by some airlines as a method to bridle unruly passengers. One such surveillance system, known as *FlightVu Witness,* is used by some British carriers. The safety and security system consists of covert cameras which are fitted throughout the passenger cabin of an airliner. These

cameras are connected to a digital video recorder. According to Riding (1998), the cameras serve two purposes: (1) deter passengers from misbehaving in the cabin, and (2) ensure the ultimate prosecution of passengers who do become violent or disruptive.

Based on the contention that United States' air carriers are providing less service and unfair pricing tactics, thereby creating an environment of resentment, anger, and violence in their customers, Senators Wyden, McCain, Snowe, and Bryan introduced the *Airline Passenger Fairness Act* (1999) into the Senate. This bill established a national policy of basic consumer fair treatment for airline passengers. Chairman Bud Shuster, R -PA., introduced similar legislation, *The Airline Passenger's Bill of Rights* (1999), during a House Transportation Committee hearing in March 1999. As drafted, Shuster's legislation would force airlines to provide cash payments to passengers stuck on runways for two or more hours. That compensation would be twice the value of the purchased ticket. The compensation would increase based on the length of the delay. In addition, passengers would be given full refunds for airline cancellations based on economic reasons.

Citing its most frequent customer complaint, the second-largest U.S. airline recently asserted that it would strip a total of about 7,200 coach seats from its 707 plane fleet to reconfigure passenger seating (Wolf, 2000). According to Wolf (1999) when the project is complete, about 58 % of American Airline's coach seats will have a seating pitch of 34 inches or more, up from the industry standard of 31 to 32 inches. (Seating pitch is the distance from the middle of one seat to the middle of another.) United Airlines, the largest United States airline, launched a program in August 1999 which created 35 to 36 inches of leg room in a new section aimed at business travelers.

According to Sanders (1997) a law enforcement program developed in Florida by the Lee County Port Authority may serve as a model for the rest of the nation to battle terrorism and other federal crimes pertaining to air travel. Police from the Lee County Port Authority were deputized as United States Marshals after attending training conducted by the Federal Bureau of Investigation (FBI), the United States Attorney's Office, and the United States Marshal's Service. By being deputized as U.S. Marshals, they were given jurisdiction over crimes committed on aircraft including air piracy, interference with flight crews, and the possession of weapons or explosives. Based on a report by Sheffer (1999), the United States Senate is now debating these and other types of measures that would provide jurisdiction to local law enforcement to act as Federal Marshals in disruptive passenger incidents.

According to Wainwright (1998), airlines could be given the power to perform breathalyzer or blood tests on passengers in a proposed crackdown on drunken behavior aboard air carriers. Blood alcohol testing (BAC), a common technique used by law enforcement personnel to determine alcohol limits of drivers of motor vehicles, could be used on airline passengers who misbehave on aircraft. Wainwright (1998) pointed out that the issues surrounding BAC testing for airline passengers would require new legislation to be developed in regard to: who could require tests to be undertaken, who could conduct blood or breathalyzer tests, the use of approved testing equipment, development of a secure record keeping system, handling and safeguarding of blood samples, penalties for refusal to take the tests, and law enforcement and adjudication guidelines for imposed citations and penalties.

Many air carriers have instituted new training measures as a method of addressing unruly passengers (Sheffer, 1999). Conflict resolution and diffusion skills, situational awareness, self-defense, passenger profiling, and crew resource management training are being taught in most recurrent training environments as a means to reduce incidents that involve air cabin safety. According to Sheffer (1999), proper training is the best defense against offensive behavior directed toward flight attendants.

The Skyrage foundation website, developed by the husband of a flight attendant who was physically assaulted aboard a United States air carrier, is using an Internet webpage to increase public awareness on an international scale (Sheffer, 1999). The Skyrage website currently provides access to news reports on the subject of unruly passengers, and educates the public in regard to disruptive behavior on board an aircraft. The public awareness campaigns employed by Skyrage depict cabin crewmembers as safety professionals rather than airborne "waiters and hostesses."

NASA's Aviation Safety Reporting System

Purpose

The Aviation Safety Reporting System (ASRS) was created in 1976 by the Federal Aviation Administration (FAA) in cooperation with the National Aeronautics and Space Administration (NASA). The intended purpose of the ASRS was to receive, process, and analyze reports of aviation incidents voluntarily submitted by participants or observers. Information reported is maintained in an active database for use in research, especially of the human factors involved in aviation safety. FAA Advisory Circular AC 00- 46D (1997) described the ASRS as a cooperative safety reporting program which invites pilots,

controllers, flight attendants, maintenance personnel, and other users of the National Airspace System to report actual or potential discrepancies and deficiencies involving the safety of aviation operations (Darby & Loftin, 1997).

In a paper delivered at the 13th Annual International Aircraft Cabin Safety Symposium, Connell and Reynard (1997) indicated that the primary reason the ASRS exists is to identify and constructively address safety issues in a timely way and to report information of safety value to crewmembers, operators, regulators, and researchers.

Furthermore the filing of a report with the ASRS concerning an incident or occurrence is considered by the FAA to be indicative of a constructive attitude which reduces or eliminates the possibility, or recurrence of, aircraft accidents or incidents (NASA, 1999).

Operations

The operations covered by the ASRS program embrace all aspects of aviation, including departure, en route, approach, landing, air traffic control, communications between aircraft and air traffic personnel, aircraft cabin operations, aircraft movement on the ground, near-midair collisions, maintenance and record keeping, and airport condition and services.

Confidentiality of Reports

The FAA determined at the inception of the ASRS program in 1975 that the effectiveness of the reporting system would be enhanced if the receipt, processing, and analysis of raw data were accomplished by NASA rather than the FAA. This would

ensure the anonymity of the reporter and of all parties involved in a reported occurrence or incident and, consequently, increase the flow of information necessary for the effective evaluation of the safety and efficiency of the reporting system (NASA, 1999).

The incident report was designed to protect the identify of the reporter. Except for reports involving accidents or crimes, the identification strip located at the top of the form is removed, time-stamped, and returned to the sender. This action removes the sender's identity from the report, provides proof that the report was submitted, and acts as a receipt. During the 26 years of ASRS operation, the confidentiality of a reporter has never been violated (Connell & Reynard, 1996).

Cabin Crewmember Reports

To encourage ASRS reporting by cabin crewmembers, a special reporting form was created for cabin crew in 1994. Developed by a team of government and industry representatives, the new form centered on issues specific to aircraft cabin safety. After it was drafted, the proposed form was submitted to four flight attendant unions and five airlines for their comments. These comments were incorporated into the finished product, NASA ARC 277C.

Although there were four forms in the NASA ARC 277 series for reporting aviation safety incidents, only form ARC 277C was specified for use by cabin crewmembers.

Theories of Passenger Misconduct

What are the underlying causes for airline passenger misconduct? This question has created a frenzy of debate and prompted theories from educators, flight attendants, pilots, psychologists, government officials, and the airlines. The literature from these varied sources cites an abundance of opinions and theories including alcohol, fear of flying, non-smoking cabins, cultural hierarchies, low oxygen environments, poor service, unfair treatment by the airline, and emotional stress caused by various aspects of the air travel experience. Divergent theories and opinions are provided within this section of the literature review.

Airline Deregulation

According to some accounts (Harakas, 1979), the Airline Deregulation Act of 1978 precipitated the onset of passenger misbehavior. With deregulation came reduced fares and bargain rates. According to Hallet (1998), airline tickets are 37% cheaper today than they were before deregulation. According to some sources (Collins & Hoff, 1998), when the new fare structure emerged, it made air travel accessible to almost everyone in the United States, thus giving wings to a whole group of people who previously had driven or stayed home. Other authors (Collins & Hoff, 1998) suggested that not only have airfares dropped but that flight options have opened up air travel to a broader range and class of traveler. The literature revealed that more people now have access to air travel and, accordingly, more people are taking advantage of this accessibility.

Accessibility of Air Travel

Some authors (Collins & Hoff, 1998) indicated that air rage is a byproduct of the increase in travelers and flights. Some records (Hallett, 1998) reflected that in 1978 only 275 million people took to the skies but that this number had more than doubled to 600 million passengers by 1997. A record 71% of airline seats were sold in 1999, compared to 62% in 1989. In addition, there were 7.3 million flights in 1988, but there were nearly 10 million in 1999. This indicated a 35% increase in air travelers the last decade.

Airline, Airport, and Social Factors

One author (Harkey, 1999) divided the factors which contribute to passenger misconduct into three distinct categories: (a) airline-specific factors, (b) airport-specific factors, and (c) social factors.

Airline specific factors encompassed issues such as reduced airline onboard services, decreased fares which make air travel accessible to a wide cross-section of the traveling public, greater numbers of passengers, physical discomfort of passengers, slow boarding processes, mechanical or Air Traffic Control flight delays, fear of crowds or flying, loss of control, and dependence on chemical palliatives during periods of frustration or fear.

Airport specific factors specified the terminal itself as a large, impersonal, and often confusing environment. Outside the terminal, parking may be difficult to find. Once inside, the passengers may also have to wait in a long, slow moving line to obtain a ticket and boarding pass. Delays may occur while waiting to check luggage, busy station

personnel may seem uncaring, monitors may give incorrect gate information, and security checkpoints may have their own set of long lines. Once the passengers reach the security station, they are scrutinized by security personnel and their belongings may be opened and checked. Some passengers may perceive this as intrusive or threatening.

Social factors included an increased level of violence in American society. Dr. Harkey claimed that cultural changes based on technology and the need for immediate gratification contribute to passenger misconduct. Consequently, Harkey compared the current phenomenon of road rage, violence which occurs on the nation's roads and highways, to air rage.

According to the Chairman of the British Air Line Pilots Association (Lucas, 1999), the media has coined the term "air rage," automatically linking it with "road rage." However, Chairman Lucas contended that the problem of air rage is much deeper and involves a much higher stake, the lives of hundreds of people aboard the aircraft.

According to Pontell, Salinger, and Geis (1983), many attacks on flight attendants occurred immediately after cabin crewmembers requested that the passenger perform or stop some behavior. The authors hypothesized that this may have occurred because passengers who are normally in control may be uncomfortable being instructed by others. Furthermore, they contended that discomfort could be intensified when flight attendants were forced to speak loudly to be heard over aircraft noise.

Aircraft Interiors

Some literature (Augustin & Wichman, 1999) suggested that the atmosphere inside an airplane added to passenger and crew stress. According to Augustin and

Wichman (1999) the air pressure inside a modern jet at cruise altitude is typically equal to an altitude of 8,000 feet. The humidity is low because the pressurization system used in the aircraft depletes nearly all water from the air inside the cabin. The authors asserted that this can cause the human body to rapidly lose moisture. This, presumably, is why the airlines serve drinks so frequently to passengers. Griffitt (1970) contended that experiencing unpleasant physical conditions makes the evaluation of strangers nearby more negative than the evaluation of strangers encountered while experiencing pleasant physical conditions. Unpleasant stimuli heighten arousal and stress which has been shown to facilitate aggression, particularly when a person experiencing these unpleasant stimuli has less perceived control of a situation (Griffitt, 1970).

High noise levels inside aircraft cabin environments may also cause stress, according to Augustin and Wichman (1999). Engine noises may interfere with the flight attendants ability to converse with passengers in normal speaking tones. The authors believed that when a flight attendant raises his or her voice in order to be heard, a passenger may easily misinterpret the tone inflection and interpret this as being shouted at. Loud, unpredictable noise over which listeners have no control has been shown to increase tension among listeners, decrease positive reactions to others, and increase aggression among people already predisposed to aggression (Bell, Fisher, Baum, & Greene, 1996).

According to some accounts, the physical pain experienced by passengers due to cramped seating, which often causes blood to pool in legs and decrease circulation, could account for unruly passenger behavior. Experience of physical pain has been linked to aggression in numerous instances (Bell, Fisher, Baum, & Greene, 1996).

The layout of the aircraft itself, with crowding and close body proxemics, could contribute to the arousal of anger in passengers, according to Augustin and Wichman (1999). They base this assumption on the notion that humans are territorial creatures by nature, which means that human beings think that the space surrounding them belongs to them, even if only temporarily. Augustin and Wichman cited the example that three-abreast coach class seats have a total of four arm rests for three people who have a total of six arms. The person in the center seat "battles" with the occupants of the outer two seats for the middle arm rests. The authors also depicted crowding and cramped seating as unnerving to passengers. Moreover, they believed that the configuration of airplane seating, combined with the option to recline the seating which takes up even more personal space, contributes to passenger misconduct. According to Myers (1996), crowded environments magnify negative or positive situational responses and human arousal in general.

Air Quality

One proponent of a link between air quality (lack of oxygen) and air rage was Vincent Mark, M.D., an environmental physician from Santa Cruz, California. Dr. Mark claimed that the curtailment of fresh air in airplanes could be causing deficient oxygen in the brains of passengers, and making people act belligerent, or even crazy (James & Nahl, 1999).

Stress

Throughout the literature, stress was often cited as having a direct relationship to in-flight passenger violence. Most authors attributed this to the fact that airlines and

airports are very special types of social and physical environments which tend to increase the likelihood that people will have difficulty coping. Studies have shown that the intensity of stress and its deleterious effects are often the results of accumulated small hassles in life (Lazarus, & Folkman, 1984). Social stressors may include social norms for relating to strangers to job-related pressures of flight attendants. The social interaction that occurs between the flight attendant and passenger may cause anger or frustration for both parties (Augustin & Wichman, 1999). Stressful physical features ranged from reduced air pressure within cabins to crowding in passenger compartments.

According to a *Newsweek* Poll conducted in 1999, 43% of adult fliers say that flying has become "more stressful" in recent years. Consequently, these stressful irritations have turned into complaints. In 1998, the Department of Transportation received 9,606 service complaints, and during the first nine weeks of 1999, almost 16,000 complaints from air travelers, nearly doubling the previous year (Underwood & Wingert, 1999).

It is also possible that the behavior of flight attendants may contribute to passengers' unruly behavior (Augustin & Wichman, 1999). For example, flight attendants often experience sleep disturbances after transmeridian flights (Suvanto & Partinen, 1994), and jet lag has been linked to decrements in performance, alertness, and mood (Monk, 1987). Flight attendants may experience other stressors which impede their ability to diffuse potentially unruly situations before they occur. For example, some may have strained relationships and poor communication with the cockpit crew, which could further limit the psychological resources at their disposal to deal with a violent passenger (Chute & Wiener, 1995).

There is evidence that married flight attendants experience higher levels of role conflict, stress, and dissatisfaction than unmarried flight attendants (Levy, Faulkner, and Dixon, 1984). Also, flight attendants often experience separation distress from being separated for even relatively short periods from their friends and partners (Jupp & Mayne, 1992).

Alcohol

A substantial portion of the literature (Borillo, 1999) censured alcohol as a significant contributing factor to "Disruptive Passenger Syndrome," a phrase coined by the First International Conference on Disruptive Airline Passengers which was held in April 1997. Dr. Borrillo, board certified in aerospace medicine, stated in a recent *Air Medical Bulletin* that "alcohol, when combined with anxiety and a perceived loss of control, may turn the normal traveler into a disruptive passenger" (p. 11). Borillo cited factors which often contribute to passenger misconduct such as "resentment of authoritative airline figures, and a decline in airline service" (p. 11). Moore, manager of the FAA's Air Carrier Security Program in the Western Pacific, is quoted as stating that "alcohol is a major factor in most of the incidents" involving unruly passengers (Pimentel, 1997, p. 1). Some authors (Moyle, 1999) attributed alcohol as the leading cause of air rage, noting one drink packs the punch of two when consumed at an elevation of 30,000 feet or above.

Collins and Hoff (1998) hypothesized that various in-flight tensions are frequently released when alcohol is introduced into the picture. They also noted that since alcohol service is a source of great revenue, the airlines have been reluctant to terminate its availability in spite of FAA reports that indicated recent in-flight disturbances involved

passengers who had too much to drink, either before boarding or during the course of the flight. Also cited is the fact that refusal by flight attendants to serve alcohol to passengers who appear to be intoxicated, as required by Title 14, FAR Part 121.573, sometimes is not done soon enough. As a result, the impaired passenger may react abusively and sometimes aggressively to such refusals (Collins & Hoff, 1998).

Passenger Personality Traits

According to an article from *Air Transport World* (Nelms, 1998), Dr. Jerrold Post, the Director of the Political Psychology Department at George Washington University and Executive Chair for the White House Commission's International Conference on Aviation Security in the 21st Century has cited three different personality traits which tend to be more prevalent in the case of alcohol-induced aggression. The first personality trait noted by Post was a sense of entitlement, whereby a high-level business, political, or entertainment figure feels entitled to certain privileges or special treatment based on his or her status. Dr. Post claimed that the reactions of these people were often out of proportion to the reality of the situation. Secondly, and somewhat related to a sense of entitlement, was opposition to authority. However, this trait differed in that it is a fixation developed in adolescence whereby being told what to do leads to an instinctive negativism or opposition to the person or persons in charge. The third personality trait noted was fear of flying which could make the passenger feel a loss of control (Hester, 1999; Nelms, 1998).

Related news reports corroborated Dr. Post's assumptions that some individuals often feel entitled to certain privileges or special treatment based on their status.

According to Riding (1998), airline passenger and lead singer for the Stone Roses rock group received a four month jail sentence following his threat to cut off the hands of a British Airways flight attendant. Another rocker, from the group Oasis, was issued a lifetime ban by Cathay Pacific Airlines based on an incident of unruly behavior.

An article from *Newsweek* (Meyer, 1999) reported that an internationally known singer and actress, after being personally searched and humiliated by airport security, was detained by police after she later squeezed an airport security woman's breast and asked "How do you like it?" (p. 42).

Another report (Marcus, 1996) indicated that a Saudi princess received six months' unsupervised probation and was ordered to pay $500 after scratching the arm of a Trans World Airlines flight attendant who didn't serve her a drink quickly enough.

Cultural and Language Differences

Sheffer (1999) charged that social, economic, cultural, and geographic boundaries impose no limits upon which passengers might become unruly. Cultural interpretations of social class have been noted as one factor contributing to passenger misconduct. The author provided the publicized example of a Middle Eastern princess who struck a flight attendant for not bringing drinks quickly enough.

Non-Smoking Flights

Numerous sources pointed to a combination of non-smoking flights and an increase in alcoholic consumption as the culprits for passenger misbehavior. Some sources also claimed that avid smokers often replaced cigarettes with alcohol on extended

flights thus escalating the potential for problems (Air Bulletin, 1997). British Airlines indicated that 70% of their unruly passenger incidents were smoking related (BBC, 1998).

Groups Traveling Together

There were also some indications in the literature (Air Bulletin, 1997) that groups traveling together, especially sports teams and their supporters, contributed to an increase in the reported incidents of passenger violence. The author's premise was based on the observation and assumption that sports teams often drink vast amounts of beer while flying. As an example, the publication cited an incident which occurred in 1996 whereby a national soccer team caused several thousand dollars worth of damages to the business class section of an airliner on the team's flight home from Hong Kong.

Airline Practices

The literature also suggested that deceptive practices within the airline industry contributed to incidents of crewmember interference. A bill entitled *Airline Passenger Fairness Act of 1999* (S.383) was introduced into the United States Senate in February 1999. This bill proposed to prohibit unfair treatment of airline passengers. Text from the bill indicated that airlines were not informing passengers truthfully or accurately of delays, cancellations, diverted or over-booked flights, or increased fares based on domination by one air carrier of a major hub.

Unmet Expectations

Patricia Friend, the president of the Association of Flight Attendants, the country's largest flight attendant union, noted that airlines deserved at least some of the blame for the growing number of disgruntled and often violent passengers. She blamed airline advertising for the unrealistic expectations of some passengers. Friend claimed that airlines often distorted the air travel experience in their media campaigns thereby increasing passengers' expectations. According to Friend (1999), when passengers don't experience the comfortable, fun travel they expected, they may become angry and retaliate.

There are indications in the literature that un-met expectations of passengers trigger irritable behavior. One flight attendant made the following observation (Fairechild, 1999):

> The difference between passenger expectations for comfort and service and the reality of what waits them on board, especially in coach class, is no doubt another contributor to the increase of air rage. The whole situation is caused, in the first place, by the airlines creating an atmosphere where rage bubbles up just like soft drinks fizz over at high altitudes. The prolific service of alcohol, combined with bad air and inhumane seating are all contributory. One more cause of air rage is certainly the in-flight cabin environment, a place that is high in toxic chemicals and allergens, and low in air pressure and oxygen. (p. 1)

An article entitled "In-Flight Incivility Today: The Unruly Passenger" described the phenomenon like this (Collins & Hoff, 1998):

> The new, inexperienced fliers, who are now able to afford air travel, still expect the glamour and type of service their higher paying predecessors enjoyed. The more seasoned travelers have come to expect a certain level of service, and are also sorely disappointed when the airlines fail to deliver. (p. 1)

The International Vice President for the Association of Flight Attendants (Hanke, 1999) contended that certain airline-instilled and enforced attitudes were responsible for the escalation of unruly passengers. The attitude that the customer is always right may be "OK for a Five and Dime store on the ground" according to Hanke (p. 4), but in the skies it fosters the idea that one can challenge authority, even aggressively. According to Hanke, the airlines' desire to attract and please potential ticket holders may have empowered and emboldened these potentially problematic passengers.

Quality of Service

An Associated Press article (Underwood & Wingert, 1999) claimed that passengers blamed declining service for making them "fighting mad." During the first nine months of 1999, the Department of Transportation received almost 16,000 complaints from air travelers, double the rate of 1998. According to Underwood and Wingert (1999), a growing number of passengers have complained about the quality of service provided by the airlines and have resorted to verbal abuse or physical assaults directed toward crewmembers.

Some authors concluded that the decreased fares resulting from the 1978 Airline Deregulation Act have caused a decline in service for airline passengers. According to some reports (Collins & Hoff, 1998), most United States airlines have reconfigured their aircraft to fit as many passengers as possible to increase seat revenues per flight mile. Every airline configuration is different, but most sources (Underwood & Wingert, 1999) indicated that airline seats are usually between 31 and 36 inches apart. The same sources

claimed that seat widths are also shrinking with economy seats being 17.2 inches wide and first class seats being approximately 21 inches wide.

According to a recent study conducted by the University of Michigan, some Americans blame the airlines for growing frustrations and passenger misconduct. When asked to rank 34 industries and public services in terms of customer satisfaction, surveyed Americans placed the airline industry third from the bottom, ahead of only network newscasts and the Internal Revenue Service (IRS) (Underwood & Wingert, 1999).

Airport Environment

Other accounts in the literature portrayed the entire air traveling experience itself as the main factor contributing to passenger misconduct. According to some accounts, the modern airport experience is often an unpleasant one creating passenger difficulties which often contribute to unruly behavior. Factors cited included inadequate parking, confusing check-in procedures, long lines at the check-in counter, more lines at the security checkpoints, shrinking airplane seats, insufficient overhead bin space, small in-flight meals, if any, and increased delays (Hoene, 1997).

Flight Delays

Delays were often cited in the literature as a major contributor to passenger frustration. Airline sources indicated that in May 1999 alone, there were 40,000 air traffic control delays nationwide (Weiss, 1999). According to some sources (Underwood & Wingert, 1999), the airlines have pointed toward the Federal Aviation Administration's

antiquated air traffic control system as the main source of flight delays and growing frustrations

According to a *Boston Globe* report (Brelis, 1999), the Chief Executive for the Air Transport Association asserted in testimony before a House Committee on Transportation and Infrastructure that airline delays "were the worst in history" (p. 1) and had caused $825 million in lost productivity to passengers and more than $1 billion to the airline industry in 1999.

Rewards for Bad Behavior

Sheffer (1999) alleged that by reinforcing negative behavior, the airlines themselves may have fed into the vicious circle of passenger disruption. Sheffer (1999) claimed that loudly complaining, and even disruptive passengers, have been pacified with upgrades, frequent flyer miles, and other perks to quiet their outbursts, or to avoid losing a potential source of future revenue. Sheffer cited one incident whereby a disruptive passenger's unruly behavior forced a Trans Atlantic flight to divert. The author then noted that just weeks following the incident, the airline sent the passenger a renewed, frequent flyer/valued customer identification card.

Lack of Training

The literature indicated that lack of training in areas such as conflict resolution or the ability to recognize potential violence was a factor contributing to incidents of crewmember interference. While cabin crews are on flights to ensure safety, a recent survey of flight crews from 25 major airlines found that the majority of them had been given little or no training in defusing awkward situations with unruly passengers

(McCarthey, 1999). Glasser, a Los Angeles psychologist, suggested that flight attendants should be trained to recognize the telltale signs of in-flight rage (Elliott, 1998).

According to *Cabin Safety Journal*, while a few airlines have studied the problem of unruly passengers, what caused these problems, and what the airlines could do to deal with the problem, little emphasis has been put on preparing the crewmembers themselves in how to deal with the incidents as they occur (Prew, 1997). Currently training for crewmembers focuses on conflict management during the initial phase of an incident whereas previous emphasis had been on training crewmembers how to restrain passengers once the event had occurred. According to Prew (1997) most United States air carriers are equipped with restraining kits which contain plastic handcuffs. The author also described restraint training as not only difficult and dangerous but complicated because it encompassed numerous legal and moral issues.

Similar Studies

In a review of 73 database reports (Hicks & Morrison, 1997) from the Aviation Safety Reporting System (ASRS), passenger-induced safety hazards were classified into the following three major categories: (1) alcohol or drug-related violence, (2) uncooperative or unstable behavior, and (3) carriage of hazardous materials and devices on board. Passengers carrying guns, both with and without the necessity to be armed, accounted for 12% of the 73 reported incidents.

Other sources indicated more specified factors. An article entitled "Air Rage: Its Psychology and Solutions" listed the following as causes of passenger violence (James & Nahl, 1999):

- delays
- cancellations
- lack of information
- queuing
- cramped seating
- sense of entitlement
- odors and heat emitted by fellow passengers
- alcohol in excess
- anxiety and fear
- long flights
- travel stress

Data collected by one United States carrier, Northwest Airlines, during 1996 concluded that incidents of passenger misconduct were attributable to eight root causes: (1) apparent intoxication, (2) seat assignment, (3) undetermined, (4) prohibited smoking, (5) luggage disputes, (6) aircrew behavior/attitude, (7) poor food service, and, (8) other. According to the data collected during 1996, apparent intoxication was considered to be responsible for 25 % of the incidents of passenger misconduct. Seat assignment problems accounted for 16%, the second largest percentage (Hoene, 1997).

Aggression and Violence

In order to obtain a comprehensive perspective of the situational factors which may contribute to episodes of passenger misconduct, one must look toward human aggression as well as the underpinnings of violence in society.

Some researchers claimed (Baron & Richardson, 1994; Geen, 1991) that aggression, like other forms of complex human behavior, is multi-determined. Likewise, it stems from the interplay of a wide range of biological, individual, cognitive, social, situational, and environmental factors. According to the Security Committee Chairman

for the British Air Line Pilots' Association (Lucas, 1999), anger, fear, frustration, and confusion are common experiences for all people, but the conversion of such fears and urges to criminal action and aggression is what constitutes problem behavior. Consequently, if passenger violence, an escalating form of human aggressive behavior, is to be understood, then the various aspects and interplay of factors which contribute to this behavior should be described in this review of the literature.

Some social psychology literature (Baron & Richardson, 1994; Huesmannn, 1994) indicated that human aggressive behavior stemmed from a host of factors and conditions listed as: (a) *biological* (such as sex hormones, drugs, alcohol, and nervous system structures), (b) *cognitive* (the way a situation is interpreted, the memories or associations triggered by the event), (c) *individual* (specific personality traits), (d) *situational and environmental* (external aspects such as temperature, noise, and crowding), and (e) *social* (the words or deeds of other people).

Social psychologists (Berkowitz, 1989) maintained that the social cause of human aggression is "frustration." Frustration involves events that prevent individuals from obtaining whatever it is they may want to obtain. According to Berkowitz (1989) frustration is not the only determinant of aggressive behavior but that it often leads to increased aggression when individuals perceive that their treatment is somewhat unfair, illegitimate, or unwarranted .

One form of aggressive behavior noted in the literature is a personality disorder known as *hostile attributional bias* (Dodge, Price, Bachorowski, & Newman, 1990). This disorder is described as the tendency to perceive hostile intentions or motives in others' actions even when these are ambiguous. Individuals with this disorder often assume that

any provocative action made by other individuals is intentional and perhaps hostile. Thus, the individuals with this disorder react accordingly with strong retaliation. According to the literature, the tendency to perceive malice in others, even when it does not really exist, is one personality characteristic closely related to high levels of violent aggression directed against others.

In sketching a psychological profile of an emotionally enraged person with the potential for violence, one must start by looking at the psychological/behavioral criteria frequently associated with individuals who become violent. A supervisor's copy of a manual entitled *Management of the Potential for Violence in the Workplace* (FAA, 1995) listed the following red flags and warning signs for assessing a person's propensity to violence:

History of Violence

A history of violence was the best predictor of violence. The probability of future crime increases with each prior criminal act. A history of domestic violence, a lifestyle of antisocial activities, or a developmental history based on being abused as a child increased the likelihood of subsequent episodes of violent behavior.

Psychosis

Psychosis, in laymen's terms, was considered to be a loss of contact with reality. Psychoses included schizophrenia, major affective disorders, and paranoid states. Persons with psychosis are noted to have a thought disorder that is often reflected in loose associations in their conversations, flat facial expressions, and extreme ambivalence.

Additionally, the first type, schizophrenics, often manifested hallucinations, poor insight, verbalized and argued with their own thoughts, and expressed bizarre, sometimes nihilistic, delusions.

The second type which have major affective disorders primarily involved a mood disorder such as severe depression.

The paranoid or delusional disorder was the third division of psychosis. Not only did these individuals believe that someone was out to get them, they also believed that they had insight that no one else had. The jealous and persecutor types were two other types of paranoid disorders. Both types resorted to violence against those whom they believed were doing them harm.

The persecutory type was the most common type of the delusional disorder described in the literature. These individuals usually had a long history of resentment toward a person or organization that they felt had slighted them in the past. They also had a tendency to exaggerate these misdeeds out of proportion to reality. These individuals often attempted to right the wrongs that had been committed against them through legal action or harassment measures. According to the literature, these individuals have an active potential for violence and must be taken seriously.

Chemical Dependence

The literature review also indicated that alcohol and certain drugs may agitate, create paranoia and cause aggressive behavior (FAA, 1995). Although some drugs were noted as more dangerous than others, most of them had the capacity to interfere dramatically with reasoning ability, with social inhibition, and with the ability to distinguish

right from wrong. The result is that an individual who had been marginally psychotic was often pushed over the edge.

Depression

Almost one in seven depressives either commit a violent act on themselves or on others up to and including suicide or homicide. Some physical signs of depression included perpetual blank, sad, or frowning expression; self-destructive behavior; social withdrawal; unrealistic expectations; increased apathy or lack of motivation; an "I don't care" attitude; sense of helplessness; inappropriate guilt or shame; lack-of-control; and an unkempt physical appearance (FAA, 1995).

Pathological Blamer

The pathological blamer often blamed the external world for all his or her problems. These people usually were depicted as unable to accept responsibility for their own actions and were consistently looking for someone to blame when things went wrong.

Impaired Neurological Functioning

Impaired neurological functioning, according to the supervisor's copy of a manual entitled *Management of the Potential for Violence in the Workplace* (FAA, 1995), reduced the capacity for impulse control. Individuals included those who were hyperactive as children, those who had brain injuries, abnormal EEGs or other subtle

neurological disorders. They were considered more prone to aggression and less capable of inhibiting themselves than the average person would be in a similar situation.

Elevated Frustration with the Environment

The manual (FAA, 1995) also stated that most ordinarily these individuals were affected by outside variables which included family environment, peer environment, and job environment. A disturbance in one or more of these support systems often triggered violent behavior.

Interest in Weapons

A fascination with weapons or shooting skills was also noted as a precursor to violence.

Personality Disorders

Personality patterns based on the way individuals viewed, thought about, related to, and perceived life had an impact on their behaviors. Two such personality disorders mentioned in the literature were antisocial personality, and the borderline personality (FAA, 1995).

The antisocial personality was more commonly noted in males than females. Individuals with this disorder tended to be irritable and aggressive with track records for violence. They had little regard for the truth, were impulsive in action, and, by most accounts, owned a weapon. Generally, antisocial individuals have little remorse about wrong-doing and tend to verbally and mentally justify their violent behavior.

The essential feature of the borderline personality was instability and lack of proper boundaries. These individuals tended to have instability in interpersonal relationships, poor self-image, and, in some instances, self-mutilating behavior. This type of individual often experienced severe mood swings and displays of inappropriate anger. This person was also considered to be very impulsive and easily agitated. Excellent manipulators of others, the borderline personality feared a real or imagined sense of abandonment. According to the FAA manual entitled *Management of the Potential for Violence in the Workplace* (FAA, 1995), these types of persons are not opposed to making suicide threats to avoid loss. According to Wheeler and Baron (1994) these borderline personalities are often absorbed with a sense of self and often use others to achieve their goals.

A large body of research in social psychology has explored both situational and dispositional causes of aggression. These sources relayed evidence that aggressiveness (a) may be an inborn and stable personality trait (Olweus, 1979), (b) is stimulated by frustration and exposure to aversive environments (Berkowitz, 1978), (c) is facilitated by transfer of arousal from other situations (Zillman, 1971), (d) is learned from social models and the mass media (Bandura, 1965; Geen, 1983), (e) is exacerbated by a certain amount of social anonymity, deindividuation (Prentice-Dunn & Rogers, 1982), or lack of self-consciousness (Hull, 1981), and (f) is stimulated by current aggressive cues in the environment (Krebs & Miller, 1985; Lippa, 1990; Sabini, 1992). If any of these factors are simultaneously present, then the introduction of alcohol combined with them increased the likelihood of human aggressive behavior.

Alcohol and Aggression

The potential for alcohol use to result in aggressive behaviors depends upon a number of personal and situational factors operating simultaneously. However, there was a notable consistency across epidemiological analyses linking homicides, an extreme form of violence, with alcohol (British Medical Association, 1995: U.S. Department of Justice, 1985). According to most of the literature pertaining to alcohol and aggression, alcohol often led to both hostility and extreme violence through interpersonal conflicts (Collins, 1981). Despite these findings, there are other psychologists that argued this point and were convinced that alcohol was rarely a direct cause of violence (Martin, 1993).

However, a great deal of the research conducted by social psychologists revealed that frustration is more likely to lead to aggression if individuals are intoxicated (Gustafson, 1984, 1991, 1993). Alcohol use was also tied to antisocial personality disorder and associated traits such as hyperactivity, impulsivity, a disinhibitory motivational state, and deviant temperament (Moss & Tarter, 1993). Subjects with an aggressive disposition were particularly likely to retaliate to provocation when intoxicated (Bailey & Taylor, 1991). In other studies, alcohol subjects were more aggressive if exposed to aversive stimuli such as noise or pain (Jeavons & Taylor, 1985; Zeichner, Pihl, Niaura, & Zacchia, 1982).

Hull (1981) developed a self-awareness model of the causes and effects of alcohol consumption that applied to aggressive behavior. Essentially, he indicated that alcohol decreased self-awareness and, as a result, reduced adherence to personal standards of

behavior. Hull claimed that "alcohol leads to decreased responsivity to situational norms of appropriate conduct" (p. 592).

Occupational Violence

In order to gain insight into the job related factors which enhance the likelihood of occupational violence for workers, and to provide a general profile of an individual who commits assaults against workers performing their job-related duties, this portion of the literature review was deemed necessary.

Occupational Safety and Health Administration (OSHA)

According to Guy (1997), United States Occupational Safety and Health Administration (OSHA) regulations deal with violence which occurs in an individual's workplace. These regulations require management to (a) commit to worker and customer safety, (b) create a policy of zero tolerance for workplace violence that encourages employees to promptly report incidents and assures them that no reprisals will be taken against those who report or experience workplace violence, (c) advise employees of company policy for filing of charges and calling police when assaulted and assist them in doing so, and (d) provide employee training and education on personal safety, assault avoidance, and assault response, and management of violent behavior. Much of the information related to occupational violence has come to light in recent years based on the reporting of data by the National Institute for Occupational Safety and Health (NIOSH) (1996) regarding the magnitude of work-related problems in the United States.

According to NIOSH statistics, each week in the United States, an average of 20 workers are murdered and 18,000 are assaulted while on the job. Each year almost one million people are injured in the United States as the result of some type of occupational violence. Consequently, 16% of all violent crime in this country occurs in a workplace setting. According to a survey and study conducted on workplace fear and violence by the Northwestern National Insurance Company (1993), the greatest risk of physical assault and attack for workers comes not from co-workers, but from customers. Moreover, victims from the survey identified interpersonal conflicts as the most likely reason they were harassed or threatened, and believed irrational behavior precipitated most attacks.

Although occupational violence can occur in any work environment, the reported incidents seem to be clustered in particular occupational settings. Indeed, 85% of all workplace homicides occur in retail or service organizations. Violent episodes which result in injury or death can be triggered by many different factors. These catalytic factors include such elements as personality conflicts, domestic problems, work related stress, emotional problems, mental illness, and drug or alcohol abuse (Guy, 1997).

Factors Which Enhance the Likelihood of Occupational Violence for Workers

The National Institute for Occupational Safety and Health (NIOSH) (1997) identified particular factors that enhanced the probability of occupational violence. The following are examples of those particular risk factors: (a) Exchange of money with the public, (b) working alone or in small numbers, (c) working late at night or in the early

morning hours, (d) working in high crime areas, (e) guarding valuable property or possessions, (f) working in community settings such as law enforcement, (g) delivery of passengers, goods, or services, (h) mobile workplace that transports people or goods, and (i) working with unstable or volatile persons in such settings as health care, social service, or criminal justice.

Limited information is available in the criminal justice and public health literature regarding the nature and magnitude of nonfatal workplace violence. However, the literature did suggest that certain types of occupations were at higher risks for incidents of occupational violence. Using the 1982 Victim Risk Supplement to the National Crime Victimization Survey, J. P. Lynch (1987) applied log linear modeling to examine workplace victimizations with regard to demographic variables as well as features of the workplace. Features of the workplace included exposure to and public access to the workplace, local travel, overnight trips, perceived danger of the workplace environment, and the frequency with which money was handled on the job. These analyses indicated that the risk of workplace victimization, or occupational violence, was related more to the task performed than to the demographic characteristics of the person performing the job. Factors related to an increased risk for workplace victimization included: (a) routine face-to-face contact with large numbers of people, (b) jobs that required routine travel, and (c) a working environment that did not have a single work site location.

Using a 1983 crime survey in metropolitan Washington, D.C., Collins and Cox (1987) found results similar to those of Lynch, specifically that occupations requiring the delivery of passengers or goods, and dealing directly with the public, were the key factors associated with an increased risk for workplace assault.

Profile of Individual Who Commits Workplace Violence

The National Safe Workplace Institute (Kinney & Johnson, 1993) offers a profile of a likely perpetrator of workplace violence. Some of the characteristics are listed below:

- Male
- White
- 35 + years
- History of violence towards women, children, or animals
- Self-esteem heavily dependent upon outside forces
- Withdrawn or a "loner"
- Often externalizes blame for problems or disappointments
- Military service background
- Alcohol or drug abuse
- History of mental health issues
- Fascination with violence
- Extreme opinions and attitudes
- Disobeys laws and procedures
- Expresses desire to harm others
- Has difficulty accepting authority

Organizational Factors

Chavez (1999) indicated several organizational factors which could contribute to episodes of occupational violence. These factors included:

- Weak or non-existent organizational policy against all forms of workplace violence
- No clearly defined rules of conduct
- Lack of employee training in:
  - Awareness of workplace violence
  - Early warning signs
  - Handling of emergencies
  - Prevention tactics

Impact of Workplace Victimizations

In a personal interview conducted by Dunham (1999), a U.S. Airways flight attendant who was assaulted and injured by a passenger in 1997 made the following statement:

> I am suffering from post traumatic stress disorder. My weight has dropped from 114 pounds down to 80. It has affected my life in many ways. I now suffer from Fribromyalgia which causes severe pain and sleep deprivation. I suffered stomach, leg, and back injuries as a result of the attack. I have not flown in over a year and I don't know when I'll go back. (p. 2)

Another attendant was quoted in an on-line article (Riley, 1999) as saying:

> The attacker broke my ankle and knee. It took two surgeries and a year to learn to walk again. My leg is deformed, and I need further surgery for damage to my perineal nerve. Flight attendants are there for the safety of the passengers, not as punching bags. (p. 1)

Information obtained from victimization surveys offered insight into the impact incidents of assault, attacks, threats, and verbal abuse had on the lives of victims of workplace violence. The information from victimization surveys related indirectly to the

incidents of workplace victimizations reported by cabin crewmembers. However, comparisons can be made which denote certain impacts and effects regardless of a victim's occupation.

Northwestern National Life (1993) surveyed victims' reactions to workplace attacks, threats, and harassment and the effects this type of encounter had on their lives. The Northwestern survey (NCVS) was the only one of its kind to report victims' reactions to on-the-job abuse by customers. The 328 respondents, who had experienced workplace attacks, threats, and harassment over their lifetime, reported that the incidents had affected them negatively. Victims indicated they were angry, fearful, stressed, intimidated, or depressed. Surveyed victims also indicated that their careers and family life were disrupted. Some said that they were physically injured or became ill as a result of the occurrence. The survey also indicated that increased levels of stress experienced led to higher employment burnout rates.

Most victims surveyed perceived the major contributing factors to the incident to be social problems which included alcohol and drug abuse, the availability of weapons, and violence on TV or in the movies.

The literature (Barling, 1998) indicated that primary victims of assaults, abuse, threats, and harassment often suffered from post traumatic stress disorder (PTSD). PTSD was defined as a severe reaction brought about by experiencing a serious threatening event (American Psychiatric Association, 1994). Symptoms of PTSD occurred when the victim had been exposed to a traumatic event and persistently re-experienced and avoided stimuli associated with that event. According to the American Psychiatric Association (1994), these criteria can persist for several months and even years in some cases.

According to Barling (1998), one need not be the primary object of workplace abuse to be affected by it. The nature of the exposure to violent incidents might well affect other employees' perceived vulnerability, that is, beliefs about whether they themselves might become primary victims (Killias, 1990). Killias suggested that three main factors are involved in vulnerability: exposure to risk, loss of control, and the anticipation of serious consequences. Whereas previously individuals believed that they exerted sufficient control over workplace events, they began to believe that they had lost the ability to control one of their most basic needs--a safe and secure working environment.

According to Barling (1998), the direct outcomes of workplace victimizations are negative mood, cognitive distraction, and fear. Barling believed that employees who are afraid might engage in withdrawal behaviors such as using sick leave to avoid returning to the environment in which the abuse occurred (Mantell & Albrecht, 1994). Schonfeld (1991) found that the fear of workplace abuse was sufficient cause to search for alternative employment. Commitment to the organization in which the abuse occurred could also be affected. Thus, workplace victimization was likely to reduce an individual's desire to remain at a given job.

Direct or vicarious exposure to abuse, threats, harassment, or assault in one's working environment, and the resulting fear, wears employees down emotionally (Barling & MacIntyre, 1993). However, some sources claimed that individuals in occupations in which exposure to physical harm is an expected event might have developed some level of tolerance to incidents of abuse or developed certain positive coping strategies (Barling, 1995; Gaines & Jermier, 1983).

An indirect link also may exist between workplace abuse and work-related accidents. According to Duffy and McGoldrick (1990), being physically attacked by passengers was a significant predictor of transit accidents for bus drivers. Physical attack also was often the result of having to reprimand passengers, which itself often increased cognitive distraction and, therefore, caused work-related accidents (Guastello, 1990).

Estimates of the related costs of passenger violence were virtually nonexistent in the literature and cost estimates of workplace victimizations from 1994 to 1999 were fragmentary. However, studies conducted prior to 1994 indicated that workplace abuse was costly to both the victims and their employing organizations. Using NCVS data, Bachman (1994) calculated the annual costs of workplace victimizations for the period of 1987 to1992. During this period, workplace victimizations resulted in half a million employees missing a total of 1,751,100 days of work, or an average of 3.5 days per incident. This resulted in over $55 million in lost wages annually, not including days covered by sick and annual leave. Injured victims bore higher costs, losing about 11 uncompensated days per incident.

Summary

In the last five years, from 1994 to 1999, there has been a significant escalation in incidents of crewmember interference. The airline industry, the Association of Flight Attendants and their advocates, as well as the Federal Aviation Administration have recommended regulatory guidelines to reduce and prevent occurrences. Certain Federal Aviation Administration guidelines, FAA Advisory Circular AC 120-65 (FAA, 1996),

have established categories of passenger misbehavior and the actions that crewmembers should take to address each category.

Statutes have been in place since the Tokyo Convention in 1963 to address offenses committed by passengers aboard aircraft. The Code of Federal Regulations Part 14 (U.S. CFR 14) imposed penalties for individuals who assaulted, intimidated, or harassed airline crewmembers. Federal Aviation Regulations (FARs) have also been created that prohibit airline passengers from interfering with crewmembers in the performance of their duties. In addition, legislation has been proposed in both the Senate and the House to increase penalties for crewmember interference.

Numerous strategies and countermeasures have been proposed to reduce the incidence and intensity of crewmember interference. These initiatives include increased penalties for misbehavior, improved training for crewmembers in dealing with difficult passengers, use of blood alcohol testing, installation of air cabin surveillance cameras, and renovations in both air cabin environment and the air traffic control system.

The literature cited numerous and diversely complex behavioral, situational, social, and environmental factors which come into play in the airport and aircraft environment that could contribute to passenger misconduct. Aviation experts and social psychologists suggested varying theories as to what degree each of these factors plays in pushing an individual over the edge. Similar studies by some airlines indicated that alcohol was to blame for the majority of incidents of crewmember interference. However, conclusions as to one underlying cause or recommendations for addressing one key area of concern were not provided by the review of the literature. Moreover, the literature brought to light numerous complex issues that called for further study and analysis.

The Aviation Safety Reporting System (ASRS) developed a reporting form specifically for cabin crewmembers to submit reports of incidents related to aviation safety including crewmember interference (Darby & Loftin, 1997). However, the reporting system was described as underused by the majority of sources. The ASRS database was noted to contain narrative reports submitted by cabin crewmembers within 10 days of actual occurrences, thus providing first-hand accounts of significant conditions or factors that led to actual events of crewmember interference.

Within the literature review, correlations were noted between the phenomenon of passenger violence and human aggressive tendencies. Moreover, the literature indicated that certain behavioral tendencies were often aggravated by the use of alcohol or drugs.

Incidents of crewmember interference occur in the crewmember's daily work environment and are considered to be one form of occupational violence. The literature review suggested that certain occupations are at higher risk for occupational violence, particularly those that work directly with the public and do not have a stationary work site.

There are organizational, situational, and personal factors that contribute to violence occurring in the workplace. By looking at these factors, policies, and consequently profiling the types of individuals who most often commit them, strategies can be put in place to prevent violent encounters between passengers and cabin crewmembers.

According to the literature, both primary victims of workplace abuse, and even those who have merely witnessed it, frequently suffered lasting adverse effects. Primary victims, such as cabin crewmembers, were often noted to suffer from post-traumatic stress

disorder, a severe reaction brought about by a particularly memorable or violent type of victimization. The effects of workplace victimization noted in the review of literature indicated certain effects: absenteeism, job burnout, emotional distress, and workplace accidents.

The cost associated with the impact of workplace victimizations caused by unruly airline passengers could not be accurately computed due to the lack of a standardized reporting system from the airlines, or unions, and the apparent absence of this type of information from publicly available records. However, there were indications in the literature that the effects of incidents of workplace victimizations were costly to the airline, the passenger responsible, and to the assaulted crewmember.

CHAPTER III

METHODOLOGY

This chapter presents the purpose and rationale for the research, a description of the narrative reports used in the study, the procedures used in collecting the data, types of data collected, as well as a description of data analysis procedures.

Purpose of the Study

The purpose of this study was to analyze narrative reports submitted by cabin crewmembers to the National Aeronautics and Space Administration Aviation Reporting System (ASRS), from 1994 to 1999, to gain insight into the reported situation-specific conditions and factors associated with actual incidents of crewmember interference. Furthermore, this study sought to identify, describe, and categorize these conditions and/or factors into specific *categories of passenger misconduct* defined in FAA Advisory Circular AC 120-65 (FAA, 1996). The identification, description, and categorization of these situation-specific conditions and factors can be used as a basis for extending knowledge of what caused past incidents, and, ultimately, assist in making informed decisions to reduce current and future trends of passenger misconduct.

Rationale for the Study

This study sought to analyze data collected from actual reports of cabin crew interference over a period of time from the point of view of the flight crew for three reasons: (a) to serve as a base for extrapolating and extending knowledge of past occurrences of passenger misconduct, (b) to identify relationships and patterns in the data which require further study, and (c) to assist the airline industry and the FAA in making informed decisions to reduce trends in crewmember interference and, thereby, increase the safety and integrity of air cabin and flight operations within the United States.

Research Objectives

The following research objectives guided this study:

1. Describe crewmember interference and how it is categorized by the FAA.
2. Identify and list in chronological order the key regulatory requirements applicable to crewmember interference.
3. Analyze Cabin Crew Reports (NASA ARC 277Cs), submitted to the NASA Aviation Safety Reporting System (ASRS) between the time period of January 1, 1994, to August 23, 1999, to determine number of deliberate violations of Title 14 Code of Federal Regulations (14 CFR) section 91.11.
4. Identify and describe situation-specific conditions and factors associated with reported events of crewmember interference to include: (a) factors which contributed to or caused the incident, (b) gender of passenger who

initiated each incident, (c) model and type of aircraft on which each incident occurred, (d) phase of the flight in which incidents most frequently occurred, (e) business seating versus coach seating, (f) individuals traveling alone versus in a group.

5. Categorize and compare reported factors which contributed to or caused an incident in accordance with each of three established *categories of passenger misconduct* defined in FAA Advisory Circular AC 120-65.
6. Determine significant relationships or patterns resulting from categorization and comparisons of reported data.

Sampling Procedure

For the purposes of this study, purposeful sampling was used. According to Isaac and Michael (1996), purposeful sampling is a method of data sampling that is particularly appropriate for research which occurred in a natural setting and is used in order to capture central contributing themes or principal outcomes. The efficacy of this type of sampling was that it provided: (a) high quality and detailed descriptions of each case to document uniqueness; and (b) important shared patterns cutting across cases that assume increased significance because they emerged out of heterogeneity.

This study purposefully sought to use only cabin crew reports for analysis purposes. Cabin crew reports were requested from the ASRS for the period of January 1, 1994, to December 1, 1999. However, this request resulted in 300 reports generated between January 1, 1994, and August 23, 1999, the last update of the database. The subjects who voluntarily submitted these reports were cabin crewmembers employed by

United States air carriers between the years of 1994 to1999. Only cabin crew reports submitted to the ASRS were used for this study. NASA's ASRS employed a de-identification process removing the reporter's identity from the active database reports prior to their release for the purposes of this study. This ensured both confidentiality and anonymity for the reporter.

Consent of Human Subjects

The Oklahoma State University Institutional Review Board, operating in accordance with federal regulations 45CFR 46 and 21 CFR 50, 56, reviews all research involving human subjects that is conducted on the Oklahoma State University campus (OSU, 1999). Regulations define a Human Subject as

> a living individual about whom an investigator obtains either (1) data through intervention or interaction with the individual, or (2) identifiable private information. (p. 3)

An Institutional Review Board (IRB) request was made for the purposes of this study at the request of the Department of Aviation Education at Oklahoma State University. However, Dr. Carol Olson, Director of University Research Compliance, Oklahoma State University, indicated that no IRB request was necessary based on the following: (a) this study did not involve any form of contact, solicitation, intervention, interaction, or manipulation of live, human subjects, and, (b) the reports used in the analysis of this study were voluntarily provided for specific purposes and de-identified prior to release to ensure confidentiality. Thus, the information associated with the identity of the reporter is not publicly known.

Methodology

Identification of the reported situation-specific conditions and factors associated with actual incidents of crewmember interference were complex and not easily nor precisely understood or explained through independent numerical analysis or the use of quantitative research methods. According to Gay (1996), the analysis of qualitative, historical reports involves a logical, rather than a statistical, analysis of data.

In order to obtain a more comprehensive view and a better understanding of the conditions and factors associated with actual reported events of crewmember interference, a qualitative, historical approach was used. Since this study used a qualitative, historical approach, it eliminated control of the phenomena and focused specifically on events of the past which had occurred in natural rather than contrived settings. According to Wiersma (2000), a qualitative, historical approach is a systematic process of reconstructing past events and interpreting the meanings of those events. Moreover, the author believes that these interpretations often aid in defining a course of action for dealing with and finding solutions to current and future problems. In addition, because qualitative, historical research is concerned with the critical evaluation and interpretation of a defined segment of the past, it was necessary to acquire some records of the period under study in the form of primary source documents.

The primary source documents obtained for this study came from narrative reports written and submitted by cabin crewmembers at the time the incident occurred (within a 10 day time frame). These primary source documents were requested and obtained from NASA's Aviation Safety Reporting System located in Moffett Field, California. Other

significant primary source documents used for the purposes of this study included legislative proposals submitted to Congress and official United States federal government regulatory statutes. Secondary source documents contained accounts that were at least once removed from actual events.

Collection of Data

The data collected for this research study was cabin crew reports submitted to the ASRS between 1994 and 1999. Cabin crew reports (NASA forms ARC 277 C) were requested from the ASRS database by sending a written request to: NASA Aviation Safety Reporting System, P.O. Box 189, Moffett Field, California 94035-0189. (See Appendix B.) The request asked for reports submitted on form ARC 277C from January 1, 1994, to December 1, 1999. This request resulted in a total of 300 reports covering the period of January 1, 1994, to August 23, 1999, the last updated period for the database.

These reports included various types of events related to aviation safety:

1. Non-adherence to United States Federal Aviation Regulations (FARs),
2. Non-adherence to published procedures,
3. Aircraft equipment problems,
4. Incidents of crewmember interference, and
5. Emergencies aboard the aircraft.

Since this study focused on human events that had already occurred, existing primary sources, rather than researcher produced data, were collected for data analysis purposes.

According to Gay (1996), in a qualitative research study, the review of related literature and data collection procedures are part of the same process and provide the data used for analysis purposes. Therefore, as this study sought to gain an insight into actual incidents of crewmember interference occurring during the time frame of 1994 to 1999, a thorough and comprehensive collection of both statistical and narrative source data was required.

This study included a review and analysis of FAA advisory circulars and departmental statements, statistical and narrative data from the U.S. NASA ASRS, anecdotal incidents reported in newspapers, psychological journals, and trade magazines, scripts from national media broadcasts, presentations and speeches of experts in the field, proposed Congressional legislation, and studies relating to the impact of workplace victimizations.

External and Internal Criticism

Methods of both external and internal criticism were used to evaluate the primary source documents used in this study. According to Wiersma (2000), external criticism in historical research evaluates the validity of the document, that is, where, when, and by whom it was produced. Internal criticism evaluates the meaning, accuracy, and trustworthiness of the content of the document based on its relevance to the research problem. The confidentiality and immunity policy used by the ASRS system enhanced the accuracy and trustworthiness of the narrative accounts. Internal criticism of the reports included: (a) knowledge and competency of the author, (b) the time delay between occurrence and recording of the event, (c) biased motives of the author, (d) consistency of

the data collection reporting system. However, the fundamental purpose of this study was not to confirm or corroborate whether crewmember perceptions were accurate or true reflections of a situation but rather to ensure that the research findings accurately reflected those reported perceptions and interpretations of actual events in an accurate manner.

Analysis of Data

The primary source data collected, specifically narrative reports from the ASRS database, were requested from NASA's Aviation Safety Reporting System. Cabin Crew Reports dating from January 1, 1994, to August 23, 1999, were used for data analysis. The report set obtained from the ASRS database contained 300 cabin crew reports. These reports were organized chronologically ranging from 1994 to 1999.

The initial step in the analysis process was to read each of the 300 reports in order to determine which contained actual incidents of crewmember interference and were violations of Code of Federal Regulations, Title 14, Section 91.11. This process resulted in a total of 78 usable, situation-specific reports.

An open coding process was then used to identify and distinguish meaningful themes as to the causes or contributing factors for each event. Open coding refers to the process of breaking down, examining, comparing, and categorizing data (Strauss & Corbin, 1990). Since each report contained a narrative description of the event including how the problem arose, how it was discovered, contributing factors, and corrective actions, the process of coding was determined by the dominant terminology (words, phrases, combinations, or strings of words) used by cabin members to describe the causes or contributing factors of each event.

This open coding process resulted in the following 8 causal factors for the 78 incidents of crewmember interference: (1) apparent intoxication (presumed to be under the influence of drugs or alcohol), (2) seat assignment, (3) smoking where prohibited, (4) carry-on luggage, (5) food service, (6) flight delays, (7) unknown or undetermined, and (8) other. Certain events which lacked sufficient narrative information to interpret a theme were coded as undetermined. In other instances, the events reported were isolated and unique and did not adapt themselves to any established theme. This category of causal factors was labeled as other for the purposes of this study. These causal or contributing factors provided the framework for subsequent cross-referencing and comparisons of the data.

Axial coding was also used to make data comparisons. Axial coding refers to a set of procedures whereby data are put back together after open coding by making connections between categories (Strauss & Corbin, 1990). For example, the original 8 causal factors were compared to each other to illustrate numerical frequencies and percentages for each causal factor in comparison to other causal factors. This numerical comparison was based on a total of 78 incidents of crewmember interference.

Selective coding was then used to further compare the causal factors categories to determine the gender of passenger who initiated each incident, the model and type of aircraft on which each incident occurred, the phase of the flight in which incidents most frequently occurred, and individuals traveling alone versus in a group.

Further comparisons were used to cross-reference causal factors to established *categories of passenger misconduct* defined in FAA Advisory Circular AC 120-65.

After completing the analysis of data segments and relationships among the categories, and making multiple comparisons, certain patterns and themes emerged. These emergent patterns presented the areas which were ultimately identified for additional research studies.

CHAPTER IV

FINDINGS

Introduction

The purpose of this study was to analyze narrative reports submitted by cabin crewmembers to the NASA Aviation Reporting System (ASRS), from 1994 to 1999, to gain insight into situation-specific conditions and factors associated with actual incidents of crewmember interference. Furthermore, this study sought to identify, describe, and categorize these factors into specific *categories of passenger misconduct* defined in FAA Advisory Circular AC 120-65.

This study sought to analyze data collected from actual reports of cabin crew interference, over an extended period of time, from the point of view of the cabin crew who experienced it, for three reasons: (1) to serve as a base for extrapolating and extending knowledge of past occurrences of passenger misconduct, (2) to identify areas which require further study, and, (3) to assist the airline industry and the FAA in making informed decisions to reduce trends in incidents of passenger misconduct.

The identification, description, and categorization of the factors that caused or contributed to actual incidents of crewmember interference can ultimately be used to devise

strategies for pro-actively decreasing current and future occurrences and, thus, increasing the safety and integrity of air cabin and flight operations within the United States.

Data Collected

The data collected for this study were cabin crewmember reports submitted to NASA's Aviation Safety Reporting System (ASRS) from 1994 to 1999. Reports were requested from the ASRS database report sets for the time frame of January 1, 1994, to December 22, 1999. This request resulted in 300 reports covering the period of January 1, 1994, to August 23, 1999.

Although there were four reporting forms available for submission, only form ARC 277C (cabin crew reports) was used to glean information for the purposes of this study. This form represented narrative descriptions of events which occurred aboard a passenger carrying aircraft as perceived by cabin crewmembers only. Report narratives were provided by both male and female cabin crewmembers who were employed by United States air carriers between the years of 1994 to 1999. According to the ASRS, reports provided for this time frame grossly under-represented the actual number of cases of passenger misconduct experienced by crewmembers.

The 300 reports were read and analyzed for direct violations of Title 14 of the Code of Federal Regulations (14 CFR) section 91.11 which governs crew interference. Of the 300 reports obtained for the purposes of this study, 78 (26%) represented incidents of crewmember interference.

Since this study used a qualitative, historical approach, a thorough and comprehensive collection of both statistical and narrative source materials was required.

This study included a review and analysis of FAA advisory circulars and departmental statements, statistical and narrative data from the NASA Aviation Safety Reporting System (ASRS), anecdotal incidents reported in newspapers, psychological journals, and trade magazines, scripts from national media broadcasts, presentations and speeches of experts in the field, proposed Congressional legislation, analytical studies on human aggression, primary reports concerning occupational risk factors, and airline flight attendants' association policy statements.

Background

Evidence of an increased incidence of crewmember interference is reflected in published statistical data. According to the Association of Flight Attendants (1999), a total of 1,166 cases of crewmember interference were reported to the FAA from 1994 to 1999. One source revealed that in the first 30 months of 1998, one of the largest United States air carriers reported 258 incidents in which passengers interfered with the duties of a cabin attendant or flight crew member. Sixty-three of these incidents involved physical actions. Research from flight attendant unions, airlines, and the data in NASA's Aviation Safety Reporting System (ASRS) further confirmed this trend. The Association of Flight Attendants, AFL-CIO, which represents more than 46,000 flight attendants at 25 airlines, received more reports of assaults against flight attendants between 1997 and 1999 than it had in the 55 year history of the Union (AFA, 1999).

Little research has been done to analyze cabin crewmember reports submitted to the ASRS to determine the situational conditions and factors associated with actual incidents of crewmember interference. Moreover, there has been no study which has attempted to

categorize these conditions and factors into specific *categories of passenger misconduct* as established and defined in FAA Advisory Circular 120-65.

Research Objectives

The following objectives guided this study:

1. Describe crewmember interference and how it is categorized by the FAA.
2. Identify and list in chronological order the key regulatory requirements applicable to crewmember interference.
3. Analyze Cabin Crew Reports (NASA ARC 277Cs), submitted to the NASA Aviation Safety Reporting System (ASRS) between the time period of January 1, 1994, to August 23, 1999, to determine number of deliberate violations of Title 14 Code of Federal Regulations (14 CFR) section 91.11.
4. Identify and describe situational conditions and factors associated with actual incidents of crewmember interference to include: (1) factors which contributed to or caused the incident, (2) gender of passenger who initiated each incident, (3) model and type of aircraft on which each incident occurred, (4) phase of the flight in which incidents most frequently occurred, (5) business class seating versus coach seating, and (6) individuals traveling alone versus in a group.
5. Categorize and compare reported factors which contributed to or caused an incident in accordance with each of three established *categories of passenger misconduct* defined in FAA Advisory Circular AC 120-65.

6. Determine significant relationships or patterns resulting from categorization and comparisons of reported data.

Research Objective #1

Findings Related to Description and Categorization of Crewmember Interference by the Federal Aviation Administration

The first research objective guiding this study was to describe *crewmember interference* and how is it categorized by the FAA. The findings from this objective will be used in the categorization of incidents of crewmember interference as reported to the ASRS and were deemed necessary in order to establish the criteria used for categorization and comparison in the research objectives.

The findings indicated that the FAA issued an FAA Advisory Circular AC 120-65 in October 1996 to air carriers, crewmembers, law enforcement officers, and the general public, which defined and established three specific categories of misconduct. Additionally, the circular provided guidelines for managing and reducing the instances of passenger interference with crewmembers (FAA, 1996). Crewmember interference was described and defined as any incident where a passenger "assaults, threatens, intimidates, or interferes with a crewmember in the performance of their duties on board a passenger carrying aircraft." (p. 1)

The FAA advisory circular recommended that specific actions be taken by crewmembers in the event any of the three categories of passenger misconduct should

occur. Furthermore, it encouraged air carriers to take a number of steps to manage passenger misconduct including the issuance of written notification warnings to passengers and the adoption by the airline of a zero tolerance policy.

In Appendix 1 of the FAA Advisory Circular 120-65 (1996), three distinct categories of passenger misconduct were described and defined: (a) A Category 1 occurrence involved a passenger(s) who creates a problem because of verbal abuse. Verbal abuse included actions such as intimidating or threatening a crewmember. This type of situation is handled by the crewmembers and ordinarily does not involve law enforcement agencies. Therefore, it is not considered a major violation of the FAA regulations. Category 1 occurrences are resolved by crewmembers without help from the cockpit or intervention from any other source. (b) A Category 2 occurrence involved a passenger who refused to comply with instructions or warnings given by a crewmember causing the pilot or other flight crewmembers to get involved (without leaving the cockpit). Category 2 occurrences may include smoking or failure to follow crewmember instructions. The literature indicated a Category 2 occurrence ordinarily required additional investigation by the FAA Flight Standards Division. (c) A Category 3 occurrence involved a passenger's obvious violation of the Federal Aviation Regulations (FAR). A Category 3 incident is considered a serious violation of the safety of the flight, resulting in the need to involve law enforcement authorities. According to the AC 120-65, the following are automatic Category 3 disturbances:

- Anytime a member of the cockpit crew must leave the cockpit to resolve a problem,

- Whenever a physical confrontation (fight) takes place in the passenger cabin,
- Unauthorized possession of weapons or contraband,
- When an unscheduled landing is made and/or restraints or handcuffs are used,
- Any continued or aggressive disturbance involving alcohol or drugs, and
- A breach of security (for example, stowaway, bomb threat, hijacking, weapon, etc.).
- Operator has program for written notification and passenger continues disturbance after receiving written notification.

Table I depicts the three categories of passenger misconduct as outlined by FAA Advisory Circular AC 120-65 as well as suggested crew and air carrier responses for each specific category defined by the FAA Advisory Circular.

Research Objective #2

Findings Related to Regulatory Requirements

The second research objective was to determine the regulatory requirements and guidance applicable to crewmember interference and list them in chronological order. This research objective was deemed necessary in that it helped establish a historical time line on the issue of crewmember interference.

The findings indicated that certain statutes applicable to offenses committed by passengers aboard aircraft, both domestic and foreign, had been in place since 1963. In

TABLE I

CATEGORIES OF PASSENGER MISCONDUCT AND SUGGESTED CREW AND AIR CARRIER RESPONSES AS DEFINED IN FAA ADVISORY CIRCULAR AC 120 - 65 (1996)

CATEGORY ONE (1)	CATEGORY TWO (2)	CATEGORY THREE (3)
Actions which do not interfere with cabin or flight safety, such as minor verbal abuse.	Passenger continues inappropriate behavior that interferes with cabin safety, such as verbal abuse or refusal to comply with federal regulations, for example, failure to fasten seatbelt when sign is illuminated or operation of unauthorized electronic equipment.	• Crewmember duties are disrupted by continuing interference. • A passenger or crewmember is injured or subjected to a credible threat of injury. • An unscheduled landing is made and/or restraints such as handcuffs are used. • Operator has program for written notification and passenger continues disturbance after receiving written notification.
Suggested Response Cabin crewmember requests the passenger to stop inappropriate behavior. Passenger complies with request. There is not further action required by the cabin crewmember. (Such an incident need not be reported to the cockpit, the air carrier, or the FAA).	Suggested Response The cabin crewmember should follow the air carrier's procedures regarding cockpit crew notification. After attempting to defuse the situation, the aircraft's captain and the cabin crewmember will coordinate the issuance of the "Airline Passenger In-Flight Disturbance Report" or other appropriate actions. Completed report is given to appropriate air carrier personnel upon gate arrival, and they may file the incident report with the FAA.	Suggested Response Advise the cockpit crew and identify the unruly passenger. Cockpit crew requests the appropriate law enforcement personnel to meet the flight upon its arrival.
Source: U. S. Federal Aviation Administration (FAA)		

order to determine and list the applicable regulations regarding crewmember interference, primary source documents were used. However, in some instances, secondary source documents were used to further explain or interpret regulations or guidance.

1963. An International Civil Aviation Organization convention (ICAO, 1963) held in Tokyo established guidelines for addressing criminal offenses and other acts committed on board aircraft which either jeopardized "good order" or the safety of the aircraft. The convention applied only to passenger carrying aircraft not military, customs, or police services. Furthermore, the convention established the definition of "in-flight" as being the "moment when power is applied for the purpose of take-off until the moment when the landing run ends." (p. 1)

The Tokyo Convention gave the aircraft commander the authority, when necessary, based on his or her judgment, to impose reasonable measures including restraint necessary to:

(a) protect the safety of the aircraft, or of persons or property therein;

(b) maintain good order and discipline on board; or

(c) enable the delivery of such person to competent authorities or to disembark such person in accordance with the provisions of Chapter I, Article 5 of the guidelines. The Tokyo Convention also provided guidance in matters of jurisdiction, powers of the aircraft commander, unlawful seizure of the aircraft, and powers and duties of countries signing the agreement.

1971. In 1971, the international community added the Hague Convention for the Suppression of Unlawful Seizure of Aircraft to the existing statutes of the Tokyo Convention. The Hague Convention not only defined the offense of unlawful seizure, it also required that it be punishable by severe penalties. In addition, it provided for commonly agreed methods of dealing with passenger offenders (Kane, 1999).

1994. The law governing the issue of crewmember interference was originally entitled 49 United States Civil Authority but was updated to Code of Federal Regulation Part 14 (CFR 14) in 1994. Title 14 of the Code of Federal Regulations (14 CFR) section 91.11 states:

> No person may assault, threaten, intimidate, or interfere with a crewmember in the performance of the crewmember's duties aboard an aircraft being operated. (p. 1)

In addition to federal statutes, disruptive behavior by unruly passengers also became a direct violation of Federal Aviation Regulations (FARs) under a corresponding number, Title 14, FAR, Part 91.11. These civil regulations are administered and enforced by the FAA have the force and effect of law.

1996. Working with representatives from flight attendant unions, airlines, and FAA personnel, the FAA issued an Advisory Circular AC 120-65 in October 1996. This advisory circular provided information to air carriers, crewmembers, law enforcement officers, and the general public, which established guidelines for managing and reducing the instances of passenger interference with crewmembers (FAA, 1996). This circular recommended that specific actions be taken by crewmembers in the event any of three categories of passenger misconduct should occur. Furthermore, it encouraged air carriers

to take a number of steps to manage passenger misconduct including the issuance of warnings and the adoption of a zero tolerance policy.

1999. In February 1999, a Senate committee voted to boost the maximum civil penalty for unruly airline passengers from $1,100 to $10,000 per incident. The Clinton presidential administration backed the move and House leaders also suggested that tougher penalties be imposed (Powelson, 1999).

Current Applicable Regulations. The regulations that are currently applicable to crewmember interference are:

- 49 United States Code (USC), Chapter 465, Section 46504 - Interference with flight crewmembers and attendants.

  An individual on an aircraft in the special aircraft jurisdiction of the United States who, by assaulting or intimidating a flight crewmember or flight attendant of the aircraft, interferes with the performance of the duties of the member or attendant or lessens the ability of the member or attendant to perform those duties, shall be fined under Title 18, imprisoned for not more than 20 years, or both. However, if a dangerous weapon is used in assaulting or intimidating the member or attendant, the individual shall be imprisoned for any term of years or for life.

Currently, FAA Order 2150.3A calls for a criminal referral as the recommended sanction when violations are discovered. However, the FAA may also prosecute violators based on civil penalty fines. The Federal Bureau of Investigation (FBI) is also prepared to investigate and pursue such violations seeking criminal charges and monetary fines. The FBI has numerous alternatives for establishing jurisdiction concerning an incident of passenger interference, even in cases where the jurisdiction is unclear, or the FBI also has the option of transferring jurisdiction to another appropriate Federal agency, if needed.

- Title 14, Federal Aviation Regulation (FAR) Part 91.11 - Prohibition against interference with crewmembers. CFR 14, Section 91.11 is synonymous with this regulation which states:

  No person may assault, threaten, intimidate, or interfere with a crewmember in the performance of the crewmember's duties aboard an aircraft being operated.

According to the FAA (1996), these two laws, 49 USC and FAR Part 91.11, combine to form the authority under which violators may be detained and/or arrested. In addition, there are also local ordinances which mirror offenses committed aboard aircraft and give local law enforcement officers jurisdiction to detain and arrest in these situations. Such laws include misdemeanor assault, assault with a deadly weapon, battery, drunk, and disturbing the peace.

Proposed Initiatives. New legislation, proposed to Congress in 1999, could increase the penalties imposed on unruly passengers to a higher rate. Nevada Senator Reid (1999), advocate for the Association of Flight Attendants, introduced a bill into the United States Senate calling for stiffer penalties for people convicted of violent or unruly behavior while on an airline flight. The bill entitled the *Safe and Friendly Skies Act of 1999* (S. 1139, 1999) proposed to increase the civil penalty for such behavior from $1,100 up to no more than $25,000. The bill also proposed a one year flying ban on any passenger found guilty of crewmember interference. In addition, the legislation opted to give the Secretary of Transportation the authority to ban passengers found guilty of dangerous behavior from flying. Subsequently, it proposed to give the Attorney General the authority to deputize local law enforcement officials to investigate such incidents immediately after the plane lands.

A similar bill, *Aviation Investment and Reform Act for the 21st Century* (H.R.1000, 1999) was recently introduced into the House. A subchapter included a "whistle blower" clause whereby no air carrier or contractor could discharge or otherwise discriminate against an airline employee with respect to compensation, terms, conditions, or privileges of employment because the employee has filed, or caused to be filed, any suit based on a violation of FAA regulations or air carrier safety regulation.

Table II indicates the chronological summary of applicable regulatory guidance for incidents of crewmember interference.

Research Objective #3

Findings Related to Crew Member Reports

The third research objective guiding this study was to analyze Cabin Crew Reports (NASA ARC 277Cs) submitted to the NASA Aviation Safety Reporting System (ASRS) between the time period of January 1, 1994, to August 23, 1999, to determine number of deliberate violations of Title 14 Code of Federal Regulations (14 CFR) Section 91.11 governing crewmember interference.

Of the 300 reports obtained for the purposes of this study, 78 (26%) reported violations of 91.11. Table III illustrates the total number of cabin crew reports from 1994 to 1999 indicative of incidents of crewmember interference. (Note that reports submitted for the period of 1999 are for an 8 month period while all other years are reported in full.)

TABLE II

CHRONOLOGICAL SUMMARY OF APPLICABLE REGULATIONS AND GUIDANCE FOR CREWMEMBER INTERFERENCE

1963	1971	1994	1996	1999	Current	Proposed
ICAO Convention held in Tokyo	Hague Convention for the Suppression of Unlawful Seizure of an Aircraft	49 United States Civil Authority updated to Code of Federal Regulations Part 14	FAA Advisory Circular 120-65	Senate boosted penalty to $10,000 per incident	49 United States Code, Chapter 465, Section 46504.	Safe and Friendly Skies Act of 1999
		Title 14,FAR, Part 91.11			Title 14, CFR, Section 91.11 and Title 14, FAR, Part 91.11	Aviation Investment and Reform Act for the 21st Century

NASA assigned each report, entered in the ASRS database, an accession number (identification code) containing 6 digits prior to the release for the reports for research purposes. Accession numbers are used as reference numbers throughout this chapter to denote specific reports. These accession numbers are coded into the ASRS database in succession, thus numbers are smaller for incidents occurring in 1994 than the accession numbers depicting incidents which occurred in 1999.

Accession numbers referenced in this study can be used for conducting additional research on situation-specific conditions and factors described in this chapter.

TABLE III

SUMMARY OF CABIN CREW REPORTS FROM
AVIATION SAFETY REPORTING SYSTEM

	1/1994	1995	1996	1997	1998	8/1999	Totals
Reports of crewmember interference	0	2	3	18	38	17	78
Total cabin crew reports submitted	4	10	23	61	144	58	300

Research Objective #4

Findings Related to Situation-Specific Conditions and Factors

The fourth research objective guiding this study was to identify and describe situation-specific conditions and factors associated with actual incidents of crewmember interference to include: (a) reported factors which contributed to or caused the incident, (b) gender of passenger who initiated each incident, (c) model and type of aircraft on which each incident occurred, (d) phase of the flight in which incidents most frequently occurred, (e) business class seating versus coach seating, and (f) individuals traveling alone versus in a group.

An identification and description of reported causal and contributing factors was necessary to facilitate subsequent inductive processes as well as the categorization of data used for the purposes of this study.

An open coding process was used as a method of organizing and obtaining data reduction for the purposes of this study. An open coding method is described as a technique often used in qualitative research as a way of organizing and reducing data into manageable units for categorization and comparison purposes (Ertmer, 1997). The researcher using open coding to search for patterns in words, combinations of words, phrases, or descriptions of events (Wiersma, 2000). In open coding, the words used to describe phenomena by participants describing certain events become the coding categories. Based on this process, the following categories (causal factors) emerged from key descriptive wording in the data: (a) apparent intoxication (being under the influence of drugs or alcohol), (b) seating assignments, (c) smoking where prohibited, (d) carry-on luggage, (e) food service, (f) flight delays, (g) undetermined, and (h) other.

Apparent Intoxication. The findings indicated that *apparent intoxication* (being under the influence of drugs or alcohol) was thought to be a causal or contributing factor in 32 (42%) incidents reported.

Passengers who appeared to be intoxicated were often verbally abusive and threatening to cabin crewmembers. They frequently demonstrated an increase in abusive behavior after being told that their alcohol supplies would either be cut off or restricted. Numerous reports indicated that passengers often carried their own liquor bottles and concealed cocktails aboard the aircraft and then became upset after these bottles or drinks were confiscated by crewmembers.

Narrative reports, in several instances, voiced opinions that intoxicated passengers should not be allowed to board the aircraft and that gate agents should be more aware of

these types of situations and take appropriate actions prior to boarding. Other reported suggestions for addressing the problem of intoxication included: (a) prohibited travel privileges for repeat offenders, (b) denied boarding for intoxicated passengers, (c) restricted number of alcoholic beverages for both first class and coach, and (d) posted passenger warnings in the boarding area.

A number of reports suggested harsher penalties and better enforcement of laws governing alcohol abuse by airline passengers. One report recommended the placement of surveillance cameras in the terminal prior to boarding.

In 13 (17%) of the total incidents, the unruly passenger was known, by a representative of the airline, to be under the influence of alcohol or drugs prior to boarding the flight. This was a direct violation of FAR 121.573 (1999) which states:

> No airline may allow a person to board an aircraft if that person appears to be intoxicated. Additionally, no passenger may be served alcoholic beverages on board if they appear to be intoxicated.

Two incidents (#427037, #410830) reported the removal of the intoxicated passenger during the boarding phase, and one report (#426021) indicated that an intoxicated passenger was denied boarding.

Seat Assignments. Problems with *seat assignments* were usually the result of duplicate assignments, splitting up of family members, upgrades, or unsatisfactory seat location. The findings indicated that problems with seat assignments resulted in 4 (5%) of the incidents of crewmember interference.

In one report (#407710), the passenger wanted an upgrade to first class and refused to leave first class seating although she had purchased a coach ticket. In another incident

(#332191), a ticketed child, over 2 years of age, was moved to mother's lap to accommodate overbooked passengers. One report (#405189) indicated that a passenger with "diplomatic immunity" became verbally abusive when his son was moved from first class to coach based on his purchased ticket. Another incident (#407658) regarded a passenger who had been angry at the gate agent prior to boarding due to a seat change. The passenger verbally abused crewmembers during taxi and the captain returned the aircraft to the gate for passenger removal.

Smoking Where Prohibited. The findings from the ASRS reports indicated that *smoking where prohibited* caused or contributed to passenger misconduct in 5 (6%) of the incidents reported. The cabin crew reports revealed that crewmembers either smelled cigarette smoke on the passenger or saw smoke billowing out of the lavatory. One incident (#377417) resulted in law enforcement meeting the flight.

Carry-on Luggage. Findings from the ASRS reports indicated that *carry-on luggage* disputes accounted for 5 (6%) of the total incidents of passenger misconduct. These disputes generally involved refusal to stow luggage in designated locations, refusal to check oversized or excess luggage, and anger that the overhead bins were full. Two reports related to luggage disputes (#377419, #380657) involved both verbal and physical assault of a crewmember. One report (#411750) noted that a crewmember refused to put a passenger's bag into an overhead bin, thus causing the passenger to "yell and cause a scene."

Two of the incidents related to luggage disputes resulted in law enforcement meeting the aircraft.

Food Service. Problems with *food or beverage service* often arose from service mishaps, insufficient choices, availability, or quantities of food or beverages. These accounted for 5 (6%) of the incidents of crewmember interference.

One incident (#374671) involved passenger theft of a beverage item from the galley. The passenger was warned by the cabin crewmember not to remove items from the galley since it was considered a theft. The passenger then threw the can of tomato juice at the flight attendant. The passenger was taken into custody by police upon gate arrival.

According to one report (#409071), a passenger became irate because she did not like the kosher meal she was served. When offered a regular meal, she refused and then struck the attending crewmember on the arm. A witness to the assault reported the incident to the ASRS. The cabin crewmember, who witnessed the event and submitted the report, indicated that the victim of the assault was obviously shaken by the assault and was unable to perform her duties for the remainder of the flight.

In another incident (#409648), a service cart bumped a passenger spilling hot coffee on his clothing. The crewmember offered him a cleaning voucher which the passenger threw into the aisle. He became verbally abusive to several crewmembers. The passenger was issued a passenger interference report which he refused. The pilot-in-command was notified and the police were called to meet the flight.

One incident (#380010) involved a passenger who had ordered a special meal prior to boarding. The passenger became verbally abusive when he discovered that the meal was not available.

Flight Delays. The causal factor labeled as *flight delays* included both air traffic and mechanical delays. The findings indicated that there were 4 (5%) incidents caused by flight delays. In one instance (#428295), the aircraft returned to the gate for passenger removal. In addition, two other reports (#372727, #428421) resulted in law enforcement meeting the flight. In one incident (#427711), which involved verbal battering of a crewmember, the unruly passenger was given a free airline ticket.

Undetermined. Since a portion of the ASRS reports did not indicate contributing factors or causes for incidents, a category labeled as *undetermined* was established. Although these specific reports indicated various types of passenger behavior, the origin of these behaviors was unknown or unreported. The findings indicated 7 (9%) of the reports were in the *undetermined* category.

Other. The causal factors and conditions labeled as *other* encompassed a variety of situations which represented individually less than 1% of the category of the total number of incidents. The factors classified as *other* accounted for 16 (20%) of the incidents reported to the ASRS between 1994 and 1999.

Examples of the conditions and factors labeled as *other* included the following reported incidents: (#367898) stowaway was found in lavatory, (#372703) male passenger molested a three year old child, (#375147) passenger refused a direct order to stop exercising in aisle, (#404435) passenger stated that "little furry animals were perched on the wings" of the aircraft, (#403098) passenger didn't like the attitude of a crewmember, (#377420) passenger refused to remove bare feet from flight attendant's jump seat, (#385120) two male passengers scuffled over one's seat back position, (#405056) teenage

passenger stole personal items from flight attendant's carry-on luggage, (#404218) passenger refused to produce a boarding pass, (#404287) physical altercation between two male passengers resulted from one falling asleep on the other's shoulder, (#402959) passenger was upset with his girlfriend over injuring her back and ending their vacation prematurely, (#409605) passenger recounted dream concerning bomb on board the aircraft, (#411420) passengers were upset because of the unavailability of a blanket for their son, (#356032) FAA inspector repeatedly rang call button to declare crewmember violations of FAR 121.391, (#389307) passenger undressed in lavatory, and (#347226) passenger impersonated a crewmember.

Table IV illustrates the factors which contributed to or caused passenger misconduct according to ASRS crewmember reports. Each causal factor is represented based on the number of incidents reported and as a percentage of the total 78 incidents reported between 1994 and 1999.

Findings Related to Gender of Passenger Initiating Disturbance

The findings indicated that of the 78 reported incidents of crewmember interference, 59 (76%) of these were initiated by males, 14 (18%) by females, and 5 (6%) were unrecorded as to the gender of the passenger initiating the disturbance. Table V illustrates gender of the passenger initiating the reported disturbance in relation to each of the causal factors: apparent intoxication, seat assignment, smoking where prohibited, carry-on luggage, food service, flight delays, unknown or undetermined, and other.

TABLE IV

SUMMARY OF FACTORS WHICH CAUSED OR CONTRIBUTED TO INCIDENTS OF PASSENGER MISCONDUCT

CAUSAL FACTORS	N	%
Apparent Intoxication (alcohol or drugs)	32	42%
Seat Assignment	4	05%
Smoking Where Prohibited	5	06%
Carry-On Luggage	5	06%
Food Service	5	06%
Flight Delays	4	05%
Unknown or Undetermined	7	09%
Other (a variety of causes, each of which accounted for less than 1% of total)	16	21%
Derived from ASRS Database Reports (1994-1999)	*Based on total of 78 reports	

TABLE V

SUMMARY OF GENDER OF PASSENGER
WHO INITIATED DISTURBANCE

	MALE	FEMALE	UNKNOWN
CAUSAL OR CONTRIBUTING FACTORS			
Apparent intoxication	26	5	1
Seat assignment	2	2	
Smoking where prohibited	2	2	1
Carry-on Luggage	5		
Food service	3	2	
Delays	2	1	1
Undetermined	5	1	1
Other	14	1	1
TOTAL	59	14	5
NUMBER OF INCIDENTS BASED ON TOTAL OF 78			

Findings Related to Model and Type of Aircraft

Of the 78 total incidents, 16 (21%) occurred on medium transport carriers (MD-80), 14 (18%) occurred on wide body transports (B-767), and 11 (14%) occurred on large transports (B-757). Passengers on larger planes were more likely to ignore safety regulations and to be abusive and physically violent to crewmembers and other passengers.

Incidents were least likely to occur in smaller aircraft and most likely to occur in medium sized aircraft.

Tables VI and VII, respectively, illustrate reported incidents according to aircraft model on which each incident of crewmember interference occurred.

Findings Related to Phase of Flight

Further analysis of the reports revealed that incidents of crewmember interference were slightly more likely to occur during the cruise phase of a flight than before or after the flight phase. They were also more likely to occur during longer flights in medium transport carriers.

Findings Related to Business (First Class)

Seating Versus Coach Seating

References to actual seat numbers were removed from the ASRS reports in the de-identification process and prior to release for research purposes. Although some narrative reports contained information regarding the seating position of the unruly passenger in regard to first class (business) and coach seating, these were too few in number to use for any basis of comparison or data analysis. Therefore, the findings indicated that the seating position of unruly passengers was not discernible from the cabin crew reports obtained for the purposes of this study.

TABLE VI

NUMBER OF INCIDENTS BY AIRCRAFT MODEL AND CAUSAL FACTORS

MODEL OF AIRCRAFT	DHC-7	MD-80	B-767	B-737	DC-10	ATR-72	A-300
CAUSAL FACTORS							
A	1	7	9		2		5
B		1		1			
C		1	1			1	
D					1	1	
E		2			1		1
F		1					1
G		1	1				
H		3	3	2	1		1
TOTALS	1	16	14	3	5	2	8

A. Apparent intoxication (being under the influence of alcohol or drugs)

B. Seat assignment

C. Smoking where prohibited

D. Luggage dispute

E. Food Service

F. Delay

G. Undetermined

H. Other

* Based on a total of 78 incidents

TABLE VII

NUMBER OF INCIDENTS BY AIRCRAFT MODEL AND CAUSAL FACTORS

AIRCRAFT MODEL	Unknown	B-757	B-727	MD-11	DC-9	Fokker 100	FK-10
CAUSAL FACTORS							
A	2	3	2				
B		3					
C	1					1	
D	1	1	1				
E		1					
F		1					1
G	4		1				
H	1	2	1	1	1		
TOTALS	9	11	5	1	1	1	1

A. Apparent intoxication (being under the influence of alcohol or drugs)

B. Seat assignment

C. Smoking where prohibited

D. Luggage dispute

E. Food Service

F. Delay

G. Undetermined

H. Other

*Based on a total of 78 incidents

Findings Related to Individuals Versus Groups

Of the 78 total incidents reported by the ASRS, 68 (87%) of the occurrences of passenger misconduct were initiated by individuals traveling alone, while 10 (13%) of the occurrences were initiated by persons traveling with companions or in a group. One report involved a group of 6 passengers on their way to a job site in Lima, Peru. According to the ASRS report (#404920), each of the six passengers had at least 10 drinks within a 2 hour period. After they were refused more alcoholic beverages, they became loud and verbally abusive. The attending crewmember contacted the cockpit and the flight was met by law enforcement authorities.

One other report (#406913) indicated that 4 passengers boarded intoxicated and drank from their own supply. One of the passengers tried to trip a crewmember after she confiscated his bottle.

Research Objective #5

Findings Related to Categories of Passenger Misconduct

The fifth research objective guiding this study was to categorize and compare reported conditions and factors which contributed to or caused an incident in accordance with each of three established categories of passenger misconduct defined in FAA Advisory Circular 120-65.

Category 1. The findings indicated that Category 1 occurrences accounted for 8 (10%) of the 78 occurrences reported to the ASRS for the time period of January 1, 1994, to August 23, 1999.

A Category 1 occurrence involves a passenger(s) who creates a problem because of verbal abuse. Verbal abuse included actions such as intimidating or threatening a crewmember. This type of situation is handled by the crewmembers and ordinarily does not involve law enforcement agencies. Therefore, it is not considered a major violation of the FAA regulations. Category 1 occurrences are ordinarily resolved by crewmembers without help from the cockpit or intervention from any other source.

Category 2. The findings indicated that Category 2 occurrences accounted for 8 (10%) of the total incidents reported.

A Category 2 occurrence involves a passenger who refuses to comply with instructions or warnings given by a crewmember causing the pilot or other flight crewmembers to get involved (without leaving the cockpit). Category 2 occurrences may include smoking or failure to follow crewmember instructions.

Category 3. The findings from the Aviation Safety Reporting System (ASRS) indicated that Category 3 offenses accounted for 62 (80%) of the reported incidents of crewmember interference. A Category 3 occurrence involves a passenger's obvious violation of the Federal Aviation Regulations (FAR). A Category 3 incident is considered a serious violation of the safety of the flight, resulting in the need to involve law enforcement authorities or the Federal Bureau of Investigation (FBI).

Table VIII illustrates a summary of *categories of passenger misconduct* in relation to causal factors.

TABLE VIII

SUMMARY OF CATEGORIES OF PASSENGER
MISCONDUCT IN RELATION
TO CAUSAL FACTORS

	CATEGORY 1	CATEGORY 2	CATEGORY 3
CAUSAL FACTORS			
apparent intoxication	2	1	29
seat assignment	1	1	2
smoking where prohibited	2	2	1
carry-on luggage	1	1	2
food service			5
delays	1		3
undetermined		1	6
other	1	2	13
TOTALS	8	8	62
*Based on a total of 78 incidents			

Certain events are automatically classified as Category 3 occurrences. They include:

- anytime a member of the cockpit crew must leave the cockpit to resolve a problem,
- whenever a physical confrontation takes place in the passenger cabin,
- unauthorized possession of weapons or contraband,
- when an unscheduled landing is made and/or restraints such as handcuffs are used,

- any continued or aggressive disturbance involving alcohol or drugs,
- a breach of security (for example, stowaway, bomb threat, hijacking, and weapon, etc.).
- operator has program for written notification and passenger continues disturbance after receiving written notification.

In order to better describe Category 3 offenses, reported events were re-categorized into each of the examples defined by FAA Advisory Circular AC 120-65 as automatic Category 3 offenses.

The findings from this re-categorization are provided under the headings: (a) pilot-in-command interventions, (b) physical confrontations, (c) unauthorized possession of weapons or contraband, (d) unscheduled landings and use of restraints, (e) continued or aggressive disturbances involving alcohol or drugs, (f) breaches of security, and (g) written notifications.

Pilot-in-Command Interventions. Cabin crewmember reports indicated that the pilot-in-command of the aircraft left the cockpit to try and resolve the conflict between passenger and cabin crewmember in 8 (10%) out of 78 occurrences.

Physical Confrontations. Cabin crew reports submitted to the ASRS database for the period of 1994 to 1999 revealed that crewmembers were subjected to both verbal and physical abuse during the performance of their duties. Moreover, physical confrontations often resulted in personal injuries to crewmembers which required medical attention.

The findings indicated 26 (33%) of the incidents reported involved physical assault of a cabin crewmembers or other passengers. Of the 78 incidents of crewmember interference, 23 (29%) reported physical assaults of crewmembers, and 3 (4%) reported physical assaults against other passengers. In 22 (28%) of the cases, the physical assault resulted in police or law enforcement meeting the flight at the request of either the cabin crew or the pilot-in-command. In 4 (5%) of the reported cases, Federal Bureau of Investigation (FBI) authorities met the aircraft at the gate.

Crewmember physical assaults by passengers included being head butted, punched in face, touched inappropriately, bitten, struck with juice can, pushed, pinched, slapped, smeared with food, grabbed and twisted hand, hit on back or breast, jerked backward by apron, and rammed by food cart.

Passenger assaults against other passengers included incidents of choking, spitting, and punching. One (#404287) of the three incidents of passenger assault directed toward another passenger resulted in the flight being diverted to an alternate destination.

One report (#406921) suggested that cabin crewmembers be given self-defense training as part of their required recurrent training. Another report (#402587) expressed the need for restraint training in the use of plastic handcuffs or the inclusion of real handcuffs for purposes of unruly passenger restraint.

Unauthorized Possession of Weapons or Contraband. The findings indicated that there were no incidents that involved weapons being brought aboard the aircraft. However, reports did indicate that in 9 (12%) of the 78 cases, contraband items were brought aboard. All 9 of these cases involved a passenger who brought alcohol aboard the

aircraft and consumed it during the flight. In 8 of these 9 reported cases, law enforcement met the flight.

Unscheduled Landings And/or Use of Restraints. The findings also indicated that the pilot-in-command made the decision to divert the flight to an alternate destination in order to have the unruly passenger removed in 6 (8%) out of the 78 total occurrences of crewmember interference. In addition, the pilot-in-command returned to the gate for passenger removal 5 (6%) times out of 78.

According to ASRS reports, restraints were used successfully in 3 (4%) of the incidents. In one instance (#402587), the captain tried to handcuff the unruly passenger, but was unsuccessful.

Continued or Aggressive Disturbances Involving Alcohol or Drugs. The findings noted that 29 (37%) of the cases that rose to a Category 3 disturbance level were considered to be "continued and aggressive disturbances involving the use of alcohol or drugs" by the unruly passenger.

Breaches of Security. The findings indicated 3 (4%) of the 78 cases involved a breach of security. One report (#367898) indicated the presence of a stowaway on the aircraft. Another report (#347226) noted a passenger who impersonated a crewmember on board the aircraft during flight. And, the third report (#409605) revealed an inappropriate remark made by a passenger about bombs being aboard the aircraft which led to the removal of the passengers and crew in order for security to conduct a bomb search.

Written Notifications. The findings indicated that numerous written notifications were given to passengers. However, each time a crewmember issued a written warning to a passenger, the event escalated to the point of physical assault on the crewmember who issued the warning. Since some airlines may not have written notification programs, there was no way of discerning these types of incidents from those who did have notification programs. Since NASA's de-identification process removed identifiers such as the names of airlines from the reports prior to their release, this information was not discernable for the purposes of this study.

Research Objective #6

Findings Related to Significant Patterns and Relationships

The sixth research objective guiding this study was to determine significant relationships or patterns resulting from categorization and comparisons of reported data. Based on the 300 reports obtained for the purposes of this study, 78 (26%) were considered to be incidents of crewmember interference. Apparent intoxication was the most significant causal or contributing factor related to these incidents and constituted 32 (42%) of the 78 incidents reported. Of the disturbances involving alcohol or drugs, the largest number, 26 (33%), were initiated by males.

Law enforcement were called to meet the aircraft in 29 (37%) of the reported incidents of apparent intoxication, thus rising to the level of Category 3 offenses. In numerous instances, the crewmember submitting the report did not know the outcome of

passengers taken into custody and often voiced frustrations over the release or special treatment of passengers after incidents of passenger misconduct.

The findings from the Aviation Safety Reporting System (ASRS) indicated that Category 3 offenses were the most prevalent and accounted for 62 (80%) of the reported incidents. A Category 3 occurrence involves a passenger's obvious violation of the Federal Aviation Regulations (FAR). In 6 (8%) of the cases which rose to a Category 3 level, the aircraft diverted to an alternate landing site to remove an unruly passenger. In 5 (6%) of the cases, the aircraft taxied back to the gate for passenger removal.

The findings indicated 26 (33%) of the incidents reported involved physical assault of a cabin crew or other passenger. All reported cases of physical assault resulted in either police or Federal Bureau of Investigation (FBI) authorities meeting the flight. Physical assaults were most frequently initiated by male passengers who were also apparently intoxicated.

Of the 78 total incidents reported by the ASRS, most of the occurrences of passenger misconduct were initiated by individuals traveling alone, 68 (87%), while 10 (13%) of the occurrences were initiated by persons traveling with companions or in a group.

The highest number of incidents occurred aboard MD-80 aircraft. The findings also indicated that passengers on larger planes were more likely to ignore safety regulations and to be abusive and physically violent to crewmembers and other passengers. Incidents were least likely to occur in smaller aircraft and most likely to occur in medium sized aircraft.

Crewmembers reported various areas of concern that require further study and must be regarded as significant since individuals took the time to note them in the ASRS

reports. These major concerns included (a) fear for personal safety or the safety of the aircraft, (b) refusal to fly to country where passenger abuse occurred, (c) physical repercussions from physical assault, (d) post traumatic stress disorder, (e) lack of support from airline and/or union, (f) increased and harsher penalties for offenders, (g) lack of crewmembers' decision making authority, (h) methods of policing and controlling alcoholic consumption, (i) inadequate training in handling the disturbance and/or self defense, (j) lack of communication or coordination with cockpit crew, (k) forced "baby sitting" of intoxicated passengers, (l) lack of enforcement of FARs, (m) the issuance of in-flight disturbance warnings, (n) the inability to cope and/or of losing control, (o) known boarding of intoxicated passengers by gate agents, (p) daily occurrences of abuse by passengers, (q) making a decision whether to file charges, (r) captain's refusal to submit paperwork or support crewmember decisions, (s) lack of adequate feedback from airline as to the outcome of events, (t) the types of people who fly, (u) female flight attendants being abused by male passengers, (v) refusal to serve unruly or abusive passengers, and (w) the tagging of offenders to avoid repeated incidents.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to analyze narrative reports submitted by cabin crewmembers to the NASA Aviation Reporting System (ASRS), from 1994 to 1999, to determine the situation-specific conditions and factors associated with actual reported incidents of crewmember interference. Furthermore, this study sought to identify, describe, and categorize these factors into specific *categories of passenger misconduct* defined in FAA Advisory Circular AC 120-65.

This study sought to analyze actual reported incidents of crewmember interference based on the point of view of the flight crew for three reasons: (a) to serve as a base for extrapolating and extending knowledge of past occurrences of passenger misconduct, (b) to identify relationships and patterns in the data which require further study, and (c) to assist the airline industry and the FAA in making informed decisions to reduce the number and severity of incidents of crewmember interference and, thereby, increase the safety and integrity of air cabin and flight operations within the United States.

Conclusions

The findings from this qualitative, historical research study resulted in the following conclusions related to both the review of literature and the research objectives which guided this study.

Conclusions Related to Description and Categorization of Crewmember Interference by the Federal Aviation Administration

The first research objective was to describe crewmember interference and how it is categorized by the FAA. An FAA Advisory Circular AC 120-65, developed in 1996, addressed and defined crewmember interference as an incident where a passenger assaults, threatens, intimidates, or interferes with a crewmember while in the performance of crew duties on board an aircraft. Although this definition covered the majority of incidents reported by cabin crew to the ASRS for the period of 1994 to 1999, it was not all encompassing. Thus, determining which incidents were representative of crewmember interference required a logical and objective approach on the part of the researcher. However, this process was aided by the three specific categorization methods described in the advisory circular.

The advisory circular was thorough and comprehensive in its approaches and explanations of the numerous steps that needed to be taken by both operators and crewmembers prior to boarding, en route, and in post-flight situations. The circular also provided sample reporting forms for use by the airline and suggested wording for in-flight magazine or ticket inserts. Moreover, the circular advised air carriers of the importance of

providing training for crewmembers in responding to abusive passengers and in completing legal requirements for prosecution purposes.

The FAA Advisory Circular made no mention of the NASA Aviation Safety Reporting System, but instead referred crewmembers to their employing air carrier for reporting purposes.

Conclusions Related to Regulatory Requirements

The second research objective which guided this study was to identify and list in chronological order the key regulatory requirements applicable to crewmember interference. Regulatory guidance for offenses committed by passengers aboard aircraft has been in existence since the ICAO Tokyo Convention in 1963 to protect the safety of the aircraft, or of persons or property therein. However, the Tokyo Convention has a jurisdictional gap which has precluded most countries from prosecuting passengers on inbound airline aircraft from countries other than their own.

Currently, Title 14 of the Code of Federal Regulations, CFR 14, Section 91.11 states that "No person may assault, threaten, intimidate, or interfere with a crewmember in the performance of their duties aboard an aircraft being operated." This regulation, coupled with 49 USC, Chapter 465, Section 4654, forms the authority under which violators may be detained and/or arrested in the United States. In addition, there are local ordinances which mirror offenses committed aboard aircraft allowing local enforcement officers jurisdiction over certain criminal offenses committed in the air. Both the airline industry and the FAA were depicted as being responsive to the safety of employees and

other passengers. The FAA encouraged the airlines to adopt "Zero Tolerance Policies" and promote swift prosecution of unruly passengers.

The inconsistency of international laws regarding the handling and prosecution of disruptive airline passengers was evident in the literature review and was considered to be of major concern to world-wide governments and air carriers.

Conclusions Related to Crewmember Reports

The third research objective which guided this study was to analyze cabin crew reports submitted to the NASA Aviation Safety Reporting System (ASRS) between the time period of January 1, 1994, to August 23, 1999, to determine the number of deliberate violations of Title 14, Section 91.11.

Of the 300 reports obtained for the purposes of this study, 78 were considered by the researcher to be incidents of crewmember interference and they were ultimately used for data analysis for the purposes of this study. However, The ASRS database reporting system was determined to be underused by cabin crewmembers for reporting safety related incidents. Cabin crew reports (NASA ARC 277C forms) accounted for a very small percentage of reports submitted to the ASRS between the years of 1994 to 1999.

While the actual number of unruly passenger incidents appear by most media, FAA, and AFA accounts to be on the rise, factual data collection activities were either nonexistent or insufficient to support this claim.

Conclusions Related to the Identification and Description of Conditions and Factors Associated With Reported Incidents

The fourth research objective which guided this study was to identify and describe situation-specific conditions and factors associated with reported events of crewmember interference to include (a) factors which contributed to or caused the incident, (b) gender of passenger who initiated each incident, (c) model and type of aircraft on which incident occurred, (d) phase of the flight in which incidents most frequently occurred, (e) business class seating versus coach seating, and (f) individuals traveling alone versus in a group.

Conclusions Related to Contributing Factors. Apparent intoxication accounted for the highest number of incidents of crewmember interference reported to the ASRS database between 1994 and 1999. The appearance of intoxication often required subjectivity on the part of gate personnel who neglected to make judgment calls prior to boarding intoxicated passengers. Data indicated that these boardings frequently resulted in disruptive incidents.

Monitoring the service of alcohol proved to be challenging for most cabin crewmembers as indicated in their reports. If passengers consumed alcohol, drugs, or prescription medication prior to boarding, intoxication sometimes resulted from serving even one alcoholic drink. Some passengers ordered drinks from several different flight attendants which frequently resulted in subsequent incidents of verbal and physical abuse.

Problems with seat assignments were often the result of the crewmember being too busy to resolve seat assignment issues due to minimum crew requirements and onboard pre-departure duties.

Carry-on luggage disputes most often occurred because of a passenger's refusal to stow luggage in approved locations, refusal to check over-sized or excess luggage, anger that overhead bins were full, objections to passenger property being moved to make room for other luggage. Passengers often insist that their baggage come on board with them; they assume that the overhead bins will expand to absorb their luggage and they don't seem to care if anyone else's possessions are moved or flattened, as long as theirs' are securely stowed. In essence, only their baggage is important and if it is moved by a crewmember or if they are asked to check it in with the gate agent, they become angry.

A number of smoking related incidents occurred in lavatories and were triggered by long flights and smokers' frustrations. Nicotine patches were considered by flight crews to be effective deterrents.

Typically, food service problems resulted in disruptions because of insufficient supplies of food or beverages, insufficient choices of food or beverages, when a passenger did not receive a requested meal, and when a mishap occurred such as a spillage of food or coffee. Passenger's expectations regarding service were either not met or were often unrealistic.

Reports concerning flight delays most often noted the passenger's frustration over not being informed of the "real" cause of the delay or how long the delay would last.

Although certain categories of behaviors had no known causes and were labeled as *undetermined*, the review of literature did indicate possible conditions or factors that

could have triggered these events: (a) biological (such as sex hormones, drugs, alcohol, and nervous system structures), (b) cognitive (the way situations are interpreted, the memories or associations triggered by specific events), (c) individual personality traits, (d) situational and environmental factors (overcrowding, temperature, and noise), and (e) social (the words or deeds of other people).

The incidents labeled as *other* in the findings portion of this study encompassed a variety of situations which represented individually less than 1% of the category of the total number of incidents. A common theme within the category labeled as *other* was the inability of individuals to control aggressive or inappropriate impulses.

Males accounted for 59 (76%) of the reported incidents of crewmember interference. Males also accounted for the largest number of alcohol related occurrences and, in addition, the incidents they initiated most often escalated to Category 3 events requiring assistance from law enforcement.

Incidents of crewmember interference occurred most frequently on medium sized carriers. Medium sized carriers accounted for the highest incidents of passenger misconduct, 14 (18%) of the 78 incidents reported. The second highest number of incidents occurred on large transports such as B- 757's. Passengers on larger planes were more likely to ignore safety regulations and to be abusive and physically violent. One must take in to account that larger planes ordinarily carry more passengers and travel longer distances.

Incidents were more likely to occur during the cruise phase of a flight than before or after the flight phase.

References to seat numbers were removed from the reports prior to release. Therefore, seating assignments of unruly passengers could not be determined from cabin crew reports with any consistency.

Of the 78 total incidents of crewmember interference, 68 (87%) were initiated by individuals traveling alone. This was consistent with the findings of Augustin & Wichman (1999) in a similar study.

Conclusions Related to Categories of Passenger Misconduct

The fifth research objective which guided this study was to categorize reported factors which contributed to or caused an incident in accordance with each of the three categories of passenger misconduct defined in FAA Advisory Circular AC 120-65. Category 3 occurrences accounted for 62 (80%) of the 78 reported incidents of crewmember interference. There were two plausible conclusions for this finding: (a) Category 3 disturbances were more often reported to the ASRS because they were the most blatant violations of crewmember interference, or (b) Category 3 occurrences actually accounted for the highest number of incidents of crewmember interference. There was no way of discerning which of these explanations was accurate based on the information obtained for the purposes of this study. About one-third of the Category 3 incidents involved physical assault of a cabin crewmember or other passenger and required pilot-in-command intervention and/or diverted and returned-to-gate flight. All Category 3 occurrences concluded with law enforcement, or the FBI, meeting the flight.

Conclusions Related to Significant Patterns and Relationships

The sixth research objective which guided this study was to determine significant relationships and patterns resulting from categorizations and comparisons of recorded data. The most significant conclusion was that incidents of cabin crew interference were most frequently initiated by male passengers, traveling alone, who were apparently intoxicated. These incidents occurred most frequently after liquor service was discontinued or contraband bottles were confiscated. These individuals frequently became both verbally and physically abusive to crewmembers and other passengers, which resulted in Category 3 offenses which indicated the need to contact law enforcement to meet the flight.

Recommendations

On the basis of the information obtained in this study, the following recommendations are suggested as related to each of the research objectives.

It is recommended that the FAA Advisory Circular 120-65 be updated to include wording that is descriptive of the situation-specific conditions and factors categorized as other for the purposes of this study. These incidents were found to be of significance in this study since they constituted 16 (20%) of the 78 incidents which required the assistance of law enforcement.

The key regulatory requirements governing crewmember interference, such as the ICAO Tokyo Convention of 1963, need to be looked at by international aviation organizations and amended to enhance their effectiveness toward unruly passengers as well as hijackers. One crucial amendment would establish clear cut jurisdiction for

taking custody of and prosecuting international air travelers committing crimes aboard aircraft owned and operated by countries outside their State of residence.

Cabin crew employed by United States carriers should be mandated by their employing airline, and particularly the FAA, to use the NASA Aviation Safety Reporting System (ASRS) and the special form created for them to provide a more reliable, comprehensive database for use by the aviation industry and to further the cause of research as to the causes of passenger violence. It would be in the interest of the airlines to compensate their employees for the time taken to report these incidents. In addition, NASA ARC 277C should be used for technical related aviation safety incidents, and an additional form should be created to record information pertinent to human related problems, for instance incidents of crewmember interference, which occur aboard the aircraft.

Further study is recommended to determine other situation-specific conditions and factors associated with and representative of actual incidents of crewmember interference to include (a) first class passengers versus coach class, (b) group interactions and involvement of other passengers, especially in regard to their reactions to incidents of violence aboard aircraft, (c) occupied time versus unoccupied time of passengers during extended travel, (e) use of written notification warnings, (f) prosecution outcomes, and (g) penalties and fines imposed against unruly passengers.

In addition, studies could be done to incorporate new programs on a pilot testing basis to include (a) use of video cameras to corroborate crewmember's depictions of an event for prosecution purposes, (b) luggage scanners in the gate area to determine if the luggage is properly sized for overhead bin storage prior to boarding, (c) use of

breathalyzers to determine passenger alcoholic levels, (d) public awareness campaigns incorporating major media outlets, (e) increased CRM, self-defense, restraint, and conflict resolution training for cabin crew, (f) outside vendor food service with choices, (g) use of nicotine patches or gum disseminated by airlines for smoking passengers on prolonged flights, (h) use of low or non-alcoholic beverages, (i) use of questions at the ticketing counter in regard to contraband items being carried by passengers, (j) issuance prior to boarding of ticket inserts depicting consequences and fines for crewmember interference, and (k) reinstatement of air marshals on extended flights.

Further study is needed to determine if these three categories of passenger misconduct are an accurate depiction of what's actually happening in terms of passenger misbehavior. I would recommend that a fourth category be included in the FAA Advisory Circular AC 120-65 to cover those instances which require the assistance of law enforcement. Suggested responses should also be incorporated into the advisory circular. Recurrent training with intensive role play scenarios is recommended as a means of recognizing and handling all four categories in an effective and timely manner.

Significant patterns of behaviors were found in this study. Additional studies should be done to profile persons most likely to commit acts of violence aboard air carriers based on incidents reported in the past to airlines, the ASRS, the FAA, and the union affiliates of cabin crew. A compilation and cross referencing of databases, or, even better, a government mandated centralized reporting system is required in order to capture all categories of passenger misconduct to aid in additional research efforts.

Additional studies are also needed to address the concerns of cabin crewmembers in regards to fear for personal safety, improved communication and coordination with

cockpit crew during any type of emergency situation, training in conflict management in order to address problems early on, successful techniques used by cabin crew in defusing potential situations, and the attitudes and assumptions of ticket and gate personnel in regards to unruly passengers and the impact they have on the safety of the flight.

Implications

There are several areas in which changes and improvements could be made to reduce incidents of crewmember interference and significantly contribute to the safety and efficiency of civil aviation within the United States. Moreover, there are measures that can be taken by the aviation community to encourage reporting of such incidents on a consistent basis by cabin crewmembers.

Prosecution of Unruly Passengers

One of the most effective deterrents to unruly behavior that is currently available is criminal prosecution. In addition to criminal charges, the FAA proposes penalties of up to $10,000 per violation for interfering with a crewmember on a domestic flight. More research should be done to record and publicize the outcomes of the penalty phase of passenger misconduct.

Updates to International Law

A review of the ICAO Tokyo Convention guidelines developed in 1963 is needed. Amendments to increase the authority of the commander of an aircraft to cover

endangerment of the passengers, crew, and the aircraft itself would be advantageous on an international scale for prosecution purposes.

Public Awareness Campaigns

Public education campaigns which advise travelers of the dangers of disruptive behavior in flight and reference potential sanctions (FARs) and associated fines could be displayed in ticket jackets, boarding areas, in-flight magazines, and on the walls of aircraft cabins.

In addition, the public should be made aware that cabin crew are not airborne waitresses but airline professionals ultimately responsible for their safety in the event of an emergency. The depiction of cabin crew as safety professionals would greatly enhance their status in the eyes of the public who now often view them only in the service capacity.

Training for Airline Personnel

Preparing flight crewmembers, management, gate and ticket agents, and ground support personnel to effectively deal with unruly passengers requires increased and improved training efforts. Airline management and airline training departments must recognize these needs and provide a level of training which will adequately prepare all airline personnel in handling incidents of passenger misconduct confidently and effectively. To promote an understanding of each other's duties and responsibilities, and to enable effective communication and coordination in abnormal situations, joint flight crew/cabin crew resource management training (CRM) should be provided.

Skill development training for crewmembers should include recognition of apparent intoxication of passengers who are boarding the aircraft, conflict resolution, conflict management techniques, identification of and appropriate responses to episodes of emotional/verbal/physical behaviors by passengers, sensitivity to passengers' expectations and frustrations, self-defense tactics, use of restraints, and procedures for the responsible service of alcohol.

Additional Research

A comprehensive, standardized reporting method that is both mandated and used consistently for reporting incidents would be effective in providing data for additional research purposes. Crewmembers who are involved in incidents of crewmember interference should be encouraged by their employers to report the details of the event to the Aviation Safety Reporting System as well as to their employing airline. Since much research, both qualitative and quantitative, is needed to alleviate and address the complex and diverse problems surrounding incidents of crewmember interference, a comprehensive reporting system is called for.

Additional research is also needed to determine how often passengers are called upon to assist cabin crew in restraining and calming unruly passengers. Group dynamics aboard an aircraft in mechanical emergency situations as well as human situations, for example Category 3 occurrences of passenger misconduct, should be studied more comprehensively as they have a direct bearing on the safety of the flight.

One particular area that needs additional research is that of air quality in passenger carrying aircraft. Although not a specific part of this research study, narrative

information provided by the ASRS reports indicated numerous incidents of nausea, dizziness, and irrational behavior associated with odd smells in the air cabin environment, particularly in MD-80 aircraft. Since the most significant occurrences of crewmember interference found in this study likewise occurred on this series of aircraft, additional research is needed to determine if correlations exist. Is it possible that certain types of individuals are more susceptible to poor air quality? If so, what are the effects?

Airline Programs and Policies

Certain steps can be taken by airlines to manage and control incidents of passenger misconduct: form employee, government, and law enforcement partnerships to develop procedures for handling violence and providing assistance to victims, clearly communicate to employees the course of action to be taken in each incident, establish policies that define a zero tolerance philosophy toward passenger misconduct, inform the public about the seriousness of passenger misconduct and emphasize the consequences such as fines and incarceration, encourage and pay employees for the time taken to report cases of misconduct and provide information on how to file complaints and provide legal assistance and support to employees who have been victims of violent incidents, provide information to employees about company liaisons to law enforcement and the FAA, and provide training to crewmembers on handling conflict situations.

Profiling of Potentially Disruptive Passengers

The profiling of unruly airline passengers, especially repeat offenders, could be a useful technique for reducing instances of passenger misconduct in-flight. Noted

parallels exist between the findings of this study and the findings of a similar study conducted by the National Safe Workplace Institute regarding profiling.

The National Safe Workplace (Kinney & Johnson, 1993) study profiled likely perpetrators of workplace violence. The results of this study could offer insights into the type of person who most frequently commits violent acts aboard an aircraft. The profiled individuals in the National Safe Workplace study were described as white males, over 35, who had a history of violence toward others. They were characterized as loners who often externalized blame for problems or disappointments on others. They frequently had military backgrounds, a history of mental health issues, and a fascination with violence. Likewise, they had extreme attitudes and opinions, often disobeyed laws and procedures, expressed desires to harm others, and had difficulty accepting authority.

Additional research could be done by the airlines, FBI, and FAA to profile individuals who commit Category 3 offenses aboard aircraft.

Airline personnel who come in contact with passengers throughout the ticketing, boarding, and cabin crew environment could be trained to recognize patterns of speech, physical characteristics or obvious signs of mental impairment, attitudes, and adverse behaviors in an attempt to identify these potential problems for current or subsequent flight crews. In addition, passengers should be required to wear name tags in order for airline personnel to call them by name; this often serves as a deterrent to aggressive behavior and deindividuation associated with the unruly passenger.

International Offender Database

International travelers who become disruptive pose the most serious problems in regard to being held accountable for their behavior. Claims of diplomatic immunity are often heard after incidents of crewmember interference. International databases which record Category 3 offenses aboard both domestic and foreign aircraft and then trigger instant profiles of a passenger's background, including past travels and possible criminal history, would be useful in identifying individuals with the potential for misconduct and, if possible, preventing them from boarding the aircraft. Repeat offenders, especially those who have resorted to physical assault of an airline employee, should be banned from future travel.

International Incident Database

While several airlines have developed their own in-house record keeping systems, no international or industry wide data base for reporting incidents of passenger misconduct is currently available. The NASA Aviation Safety Reporting System (ASRS) is available for cabin crew reporting in the United States. A similar record keeping system is available in Britain. The Legal Bureau of ICAO acts as a central collection point for these types of incidents and ensures full confidentiality as does the ASRS. A published yearly report of analyzed data would be beneficial to the aviation community in assessing causes and the impacts of events on cabin crew. An international database would be especially beneficial for record keeping and research purposes world-wide.

Use of Surveillance Cameras

Video cameras are used in department stores, police cars, bank teller machines, toll booths, retail stores, and in a variety of other public places. Airlines could use surveillance cameras in aircraft cabins as deterrents to criminal behavior. Posted notifications to inform passengers that their actions are being recorded aboard the aircraft could reduce incidents of verbal abuse and physical assault. Videotaped flights could also provide evidence of passenger misconduct for prosecution purposes. A brief word in regard to these video cameras could be inserted into the flight attendant's pre-takeoff announcement.

Law Enforcement Initiatives and Jurisdiction

The most perplexing difficulty in prosecuting offenders lies with law enforcement jurisdiction. The minute the door is closed on the aircraft, an onboard assault becomes a federal issue, which is ultimately handled by the FBI. But, after an attack, it's often local law enforcement officers who meet the inbound aircraft for passenger removal. In most instances, local police do not have the authority to arrest a passenger who is suspected of committing a violent act on the aircraft. They can only detain suspects for a reasonable period of time until FBI agents arrive. If understaffed FBI offices fail to respond promptly, the suspect may be released without punishment. In order to assist the FBI in federal crimes, law enforcement agencies, particularly those who frequent nearby airports for passenger removal, could initiate Federal Aviation Law Enforcement Enhancement Programs and attend training provided by the FBI in conjunction with the U.S. Attorney's Office and the U.S. Marshal's Service. After the completion of training, these officers

could be deputized as federal marshals. This would allow them the authority to immediately deal with federal violations, from hijacked airliners to unruly passengers.

Bringing back federal marshals to accompany extended flights, as was done in the early 1960s as a deterrent to hijackings, could prove effective in circumventing passenger misconduct.

Increased Penalties

Legislation to increase the penalties for crewmember interference has been recently introduced in both the House and the Senate and is being fully backed by the cabin crew unions and their affiliates. According to Reiss (1999), governmental action is indispensable when it comes to acts of endangerment against aircraft or occupants. Likewise, there is evidence that sound and enforceable laws are necessary for the creation of a culture, a pervasive sense of awareness among the traveling public that boarding an aircraft is not the equivalent of entering into a vacuum where personal responsibility and accountability for one's actions are somehow suspended.

The major emphasis of regulations and guidance is not to persecute and penalize a small minority of passengers, but rather on the safety and security of the vast majority, and their legitimate expectation that their journey will be free from undue harassment, intimidation, or abuse by fellow passengers.

Post-Event Counseling

The impact of passenger abuse directed toward crewmembers, particularly physical assaults, can cause long term negative effects. On the job, victims of violent episodes often experience employment burnout, post traumatic stress disorder, feelings of vulnerability, and loss of control. Other outcomes can cause negative moods, depression,

cognitive distraction, and fear. In addition, workers who have been victimized often engage in withdrawal behaviors such as using sick leave to avoid returning to the environment in which the abuse occurred. Airlines should provide post-event counseling for victims of passenger misconduct, particularly assault.

Alcohol Focus Groups

Responsible alcohol monitoring and refusal of service is often the responsibility of the cabin crewmember. Gate agents must frequently make decisions as to whether passengers are too intoxicated to board. Alcohol accounts for the highest number of reported incidents of passenger misconduct, not only in this study, but in similar studies by specific airlines. Focus groups should be formed by the airline and the FAA to discuss the problems caused by the overconsumption of alcohol and search for workable solutions that won't penalize passengers who drink yet don't cause problems.

BIBLIOGRAPHY

Air Bulletin. (1997, April 18). Smoking ban makes passengers more violent. The AirBulletin, 1, (3). [On-line]. Available: http://www.airconnex.com/bulletin/back/04-18.html.

Airline Passenger Bill of Rights (introduced in the House), H.R. 700, 106th Congress, 1st Sess. (1999).

Airline Passenger Fairness Act of 1999 (introduced in the Senate), S. 383, 106th Congress., 1st Sess. (1999).

Association of Flight Attendants. (1999, September 17). International smoking ban. News From AFA Advocate and FlightPAC. [On-line]. Available: http://ourworld.compuserve.com/homepages/afa_ ualmec/advocate.htm.

Association of Flight Attendants. (1999, September 17). Unruly and disruptive passengers. Association of Flight Attendants. [On-line]. Available: http://www.flightattendants-afa.org/unruly.htm.

Association of Flight Attendants. (1999, September 20). Punched by a passenger: Las Vegas flight attendant to describe assault at airport press conference on Monday: Urges passage of bill introduced by Senator Reid to increase penalties for air rage. Association of Flight Attendants. [On-line]. Available: http://www.flightattendant-afa.org/html.

Augustin, S., & Wichman, H. (1999, May 5). Stress and its relationship to in-flight violence. Tenth Biennial International Symposium on Aviation Psychology. Columbus, Ohio.

Aviation Investment and Reform Act for the 21st Century (introduced into the House), H.R. 1000, 106th Congress, 1st Sess. (1999).

Aviation Safety Protection Act of 1996 (introduced into the House), H.R. 3187,104th Congress, 2nd Sess. (1996).

Bachman, R. (1994, July). Violence and theft in the workplace. Crime Data Brief: National Crime Victimization Survey. Washington, DC: Bureau of Justice Statistics, U. S. Department of Justice.

Bailey, D.S., & Taylor, S.P. (1991). Effects of alcohol and aggressive disposition on human physical aggression. Journal of Research Personality, 25, 334-342.

Bandura, A. (1973). Social learning theory. Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. (1965). Influence of model's reinforcement contingencies on the acquisition of imitative responses. Journal of Personality and Social Psychology, 1, 589-595.

Barling, J. (1998). The prediction, experience, and consequences of workplace violence. In VandenBos, G., & Bulatao, E. (Eds.) Violence on the Job. 29-47. Washington, D.C.: American Psychological Association.

Barling, J., & MacIntyre, A. (1993). Daily work role stressors, mood, and emotional exhaustion. Work and Stress, 7, 315-325.

Barling, J. (1995). Some correlates of workplace violence. Manuscript submitted for publication.

Baron, R.A., & Richardson, D.R. (1994). Human aggression (2nd ed.). New York, NY: Plenum.

Baum, A. (1990). Stress, intrusive imagery, and chronic disease. Health Psychology, 9, 653-675.

Baum, A., Fleming, R., & Davidson, L.M. (1983). Natural disaster and technological catastrophe. Environment and Behavior, 15, 333-354.

BBC Online Network. (1998, September 4). When air passengers fly into a rage. BBC News. [On-line]. Available: http://news.bbc.co.uk/hi/english/uk/newsid_164000/164146.stm.

Bell, P.A., Greene, T. C., Fisher, J.D., & Baum, A. (1996). Environmental psychology. New York: Harcourt Brace College Publishers.

Berkowitz, L. (1978). Whatever happened to the frustration-aggression hypothesis? American Behavioral Scientist, 21, 691-708.

Bethune, G. (1999, August 9). Bar violent passengers from U.S. airlines. Aviation Week's Air Safety Center. [On-line]. Available: http://www.aviationweek.com/safety/news/nz990809.htm.

Borrillo, D. (1999, Summer). Air rage: modern-day dogfight. Federal Air Surgeon's Bulletin, 99-2, 1, 11.

Brelis, M. (1999, October 15). Garvey: airlines must do more to ease delays. The Boston Globe. [On-line]. Available: http://www.boston.com/dailyglobe2/288/bus... airlines_must_do_more_to_ease_delays+.shtml.

British Medical Association. (1995, September). MP's and Portman group clash on alcohol and crime. United Kingdom Alcohol Alert: Incorporating Alliance News, 12. London: Institute of Alcohol Studies.

Chavez, L.J. (1999, September 10). Organizational factors contributing to workplace violence. Early Warning Signs [on-line]. Available: http://members.aol.com/endwpv/eworg.html.

Chute, R.D., & Wiener, E. L. (1995). Cockpit-Cabin communication: A tale of two cultures. The International Journal of Aviation Psychology, 5, 257-276.

CNN Interactive. (1996, December 13). Aviation panel calls for new security measures. U.S. News Story Page. [On-line]. Available: http://cnn.com/US/9612/13/airline/htm.

Collins, J.J. (1981). Drinking and crime: Perspectives on the relationships between alcohol consumption and criminal behavior. New York, NY: Guilford Press.

Collins, J.J., & Cox, B.G. (1987). Job activities and personal crime victimization: Implications for theory. Social Science Research, 16, 345-360.

Collins, S., & Hoff, J. (1998, September 17). In-flight incivility today; The unruly passenger. Organization of Flight Attendants. [On-line]. Available: http://www.ofainc.com/newsletters/1998/ofapg5.html.

Collis, R. (1998, November 6). A growing problem of sky rage. International Herald Tribune. [On-line]. Available: http://www.iht.com/IHT/RC/98/rc110698.html

Connell, L.J., & Reynard, D. (1996). Aviation safety incident reporting: The NASA aviation safety reporting sytem. Proceedings of the 13th Annual International Aircraft Cabin Safety Symposium. Torrance, CA. Southern California Safety Institute.

Curtis, K. (2000, March 18). Plane's passengers halt attack in cockpit. The Daily Oklahoman, p. 11A.

Darby, R., Orthmann, G., & Lofton, T. (Eds.). (1997, May- June). FAA, pilots and flight attendants propose measures to reduce passenger interference with cabin crews. Cabin Crew Safety, 32, (3) 1-7.

Dodge, K.A., Price, J.M., Bachorowski, J.A. & Newman, J. P. (1990). Hostile attributional biases in severely aggressive adolescents. Journal of Abnormal Psychology, 99, 385-392.

Duffy, C.A. & McGoldrick, A.E. (1990). Stress and the bus driver in the UK transport industry. Work and Stress, 4, 17-27.

Dunham, A.G. (1999, January 20). Interview with sky rage victim Renee Sheffer. About.com. [On-line]. Available: http://wysiwyg:46http://airtravel.miningco.co...e& Tmog=70452353495223&Mint=70452353495223.

Elliot, C. (1999, September 7). Flying off the handle. ABC News.com. [On-line]. Available: http://abcnews.go.com/sections/travel/Crabby/morerage.html.

Ertmer, P.A. (1997). Common qualitative research designs. In Leedy, P.D. (Ed.), Practical Research Planning and Design (6th ed.). Upper Saddle River, NJ: Merrill.

Fairechild, D. (1999, November 4). Air rage. Terrorism of temperamental travelers. Flyana.com. [On-line]. Available: http://flyana.com/rage.html.

Federal Aviation Administration. (1995). Supervisor's guide to management of the potential for violence in the workplace, January 1995. Oklahoma City, OK: Author.

Federal Aviation Administration. (1996). Interference with crewmembers in the performance of their duties. (FAA Advisory Circular 120-65). Washington, DC: Author.

Federal Aviation Administration. (1996, November 21). FAA offers guidance to safeguard against employee misconduct. FAA News. [On-line]. Available: http://www.dot.gov/affairs/1996/apa19996.htm.

Federal Aviation Administration. (1997, February 26). Aviation safety reporting program. (FAA Advisory Circular 00-46D). Washington, DC: Author.

Field, D. (1998, November 3). Controlling unruly fliers: Airlines consider blacklisting troublemakers. USA Today Travel Guide. [On-line]. Available: http://www.usatoday.com/life/travel/business/t1103uf.htm.

Finn, P. (1996, March 18). Unfriendly skies. Washington Post. p. 1A.

Finn, P. (1996, March 17). Flight attendants under siege by unruly passengers. Detroit News. [On-line]. Available: http://www/detnews.com/menu/stories/48198/htm.

Flannery, R.B., Jr. (1997). Violence in America. New York: Continuum Publishing.

Friend, P.A. (1998). Speeches of Patricia A. Friend, International President of the Association of Flight Attendants, AFL-CIO. Flight Attendants Association. [On-line]. Available: http://www.afanet.org/chiefspeech.htm.

Gaines, J., & Jermier, J.J. (1983). Emotional exhaustion in a high stress organization. Academy of Management Journal, 26, 567-586.

Gardner, G.S. (1998, June). Statement of Associate Administrator for Regulation and Certification, Federal Aviation Administration. Speech presented to House Committee on Transportation and Infrastructure, Subcommittee on Aviation concerning the issue of unruly passengers, Washington, DC.

Gay, L.R. (1996). Historical research. Educational Research: Competencies for Analysis and Application (5th ed.). Upper Saddle River, NJ.: Prentice-Hall, Inc.

Geen, R.G. (1983). Aggression and television violence. In R.G. Green and E.I. Donnerstein (Eds.), Aggression: Theoretical and empirical reviews, 2 pp.103-125. New York: Academic press.

Griffitt, W. (1970). Environmental effects on interpersonal affective behavior: Ambient effective temperature and attraction. Journal of Personality and Social Psychology, 15, 240-244.

Guastello, S. J. (1990). Psychological variables related to transit safety: The application of catastrophe theory. Work and Stress, 5, 17-28.

Gustafson, R. (1984). Alcohol, frustration, and direct physical aggression: A methodological point of view. Psychological Reports, 55, 959-966.

Gustafson, R. (1991). Male physical aggression as a function of alcohol, frustration, and subjective mood. International Journal of the Addictions, 26 (3), 255-266.

Gustafson, R. (1993). What do experimental paradigms tell us about alcohol-related aggressive responding? Journal of Studies on Alcohol: Alcohol and Aggression. (Suppl. 11) 20-29.

Guy, B.M. (1997). Workplace violence: A manager's guide to risk assessment and prevention. Tanner & Guin, L.L.C. [On-line]. Available: http://www.tannerguin.com/pubs/le/articles/emplaw/emplaw3.html

Hallett, C.B. (1998, February 27). Airfares are a bargain. USA Today. 64-66.

Hanke, M.K. (1997, August 7). Effective procedures for handling crew interference. Speech at San Francisco International Airport.

Harakas, M. (1979, March 4). Friendly skies? Palm Beach Post Times, pp. A1, A10.

Harkey, J. A. (1999, March). Causes of and remedies for passenger misconduct. Flight Safety: Management, Measurement and Margins. Eleventh annual European Aviation Safety Seminar. Amsterdam, Netherlands: Flight Safety Foundation. 261-268.

Hester, E.N. (1999, September 7). Flying in the age of rage. Salon.com Travel Diary. [On-line]. Available: http://www.salon.com/travel/diary/hest/1999/09/07/rage/index.html.

Hicks, B., & Morrison, R. (1997, March). Passenger-related safety hazards. ASRS Directline. [On-line]. Available: http://olias.arc.nasa.gov/ASRS/d19pax.htm

Hoene, Cindy. (1997, April). Responding to the challenge of disruptive passengers: An airline perspective. Airline Pilots' Association First International Conference on Disruptive Passengers 1997. Washington, D.C.

Huesmann, L. R. (Ed.). (1994). Aggressive behavior: Current perspectives. New York: Plenum.

Hull, J.G. (1981). A self-awareness model of the causes and effects of alcohol consumption. Journal of Abnormal Psychology, 90 (6), 586-600.

ICAO. (1963, September). Convention on offences [sic] and certain other acts committed on board aircraft. Tokyo, Japan: ICAO, 1-11.

International Conference on Disruptive Airline Passengers. (1997, April 30). Sponsored by Airline Pilots Association. Washington, DC.

International Transport Workers Federation. (1999, October 27). ICAO study group on unruly passengers. ITF Civil Aviation Section. [On-line]. Available: http://fimmen.itf.org.uk/SECTIONS/CA/unrulystudy.htm.

International Transport Workers Federation. (1999, October 27). Campaign against unruly passengers. ITF Civl Aviation Section. [On-line]. Available: http://fimmen.itf.org.uk/SECTIONS/CA/unruly4.htm.

Isaac, S. & Michael, W.B. (1997). Handbook in research and evaluation: For education and the behavioral sciences. (3rd. ed.). San Diego, CA: Educational and Industrial Testing Services.

James, L., & Nahl, D. (1999, October 8). Air rage: Its psychology and solutions. Driving Psychology. [On-line]. Available: http://aloha.net/~dyc/airrage.html.

Jeavons, C.M., & Taylor, S.P. (1985). The control of alcohol-related aggression redirecting the inebriate's attention to socially appropriate conduct. Aggressive Behavior, 11, 93-101.

Jupp, J.J., & Mayne, P.R. (1992). Flying apart: Separation distress in female flight attendants. Australian Psychologist, 27, 154-158.

Kane, R.F. (1999, October). Disruptive passengers: Some legal aspects. Speech presented at Miniconference on Disruptive Passengers. Cranebank, United Kingdom.

Killias, M. (1990). Vulnerability: Towards a better understanding of a key variable in the genesis of fear of crime. Violence and Victims, 5, 97-108.

Kinney, J.A., & Johnson, D.L. (1993). Breaking point: The workplace violence epidemic and what to do about it. Chicago: National Safe Workplace Institute.

Krebs, D.L., & Miller, D.T. (1985). Altruism and aggression. In G. Lindzey & E. Aronson (Eds.), Handbook of Social Psychology (3rd ed., pp. 1-72). New York: Random House.

Lazarus, R.S., & Folkman, S. (1984). Stress, appraisal, and coping. New York: Springer.

Levy, D.E., Faulkner, G.L., & Dixon, R.D. (1984). Work and family interaction: The dual career family of the flight attendant. Humbolt Journal of Social Relations, 11, 67-86.

Lion, J.R., Snyder, W., & Merrill, G.L. (1981). Underreporting of assaults on staff in state hospital. Hospital and Community Psychiatry, 32, 497-498.

Lippa, R. A. (1990). Introduction to Social Psychology. Belmont, CA: Wadsworth.

Loviglio, J. (1998, November 11). Air rage growing- pilots say nicotine patch and less alcohol might help. Sightings . [On-line]. Available: http://www.sightings.com/ufo.airrage.htm.

Lucas, B. (1999, April/May). Disorderly passengers: The BALPA view. Journal of the British Air Line Pilots Association. [On-line]. Available: http://www.balpa.org.uk/the_log/Disorderly.html.

Luckey, S. (1998, June 11). Passenger interference and carry-on baggage limits. Air Line Pilots' Association. [On-line]. Available: http://alpa.org/internet/tm/sum61198.html.

Lynch, J. P. (1987). Routine activity and victimization at work. Journal of Quantitative Criminology, 3, 283-300.

Mantell, M.R., & Albrecht, S. (1994). Ticking bombs: Defusing violence in the workplace. Homewood, IL: Irwin.

Marcus, J. (1996, January 1). In-flight assaults up, say attendants. The Denver Post, p.1.

Martin, S. (Ed.). (1993). Alcohol and interpersonal violence: Fostering multidisciplinary perspectives. National Institute on Alcohol Abuse and Alcoholism: Research Monograph No. 24; NIH Publication No. 93-3496. Rockville, MD: U.S. Department of Health and Human Services.

McCarthy, T. (1999, January 24). Air rage rises, fueled by stress and alcohol. Salt Lake Tribune. [On-line]. Available:http://www.sltrib.com/1999/jan/01241999/travel/76849/htm.

McMillan, J. H., & Schumacher, S. (1993). Research in education: A conceptual understanding. New York: Harper Collins.

Meyer, M. (1999, November 29). Flying wildly out of control. Newsweek. 42.

Monk, T. H. (1987). Coping with the stress of jet lag. Work and Stress, 1, 163-166.

Moss, H., & Tarter, R. (1993). Substance abuse, aggression, and violence: What are the connections? American Journal on Addictions, 2 (2), 149-160.

Moyle, E. (1999, August 9). Flying the angry skies. CNEWS. [On-line]. Available: http://www.canoe.ca/CNEWSLife9908/09_rage.html

Myers, D.G. (1996). Social psychology. New York: McGraw Hill.

National Institute for Occupational Safety and Health. (1996). Risk factors and prevention strategies. Violence in the Workplace. Cincinnati, OH: United States Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health. DHHS (NIOSH) Publication No. 96-100).

Nelms, D.W. (1998, March). Passenger violence: as more passengers fill more aircraft, the airlines are finding the skies decidedly less friendly. Air Transport World. 34- 43.

Northwestern National Life. (1993). Fear and violence in the workplace: a survey documenting the experience of American workers. Minneapolis, MN: Author.

OAG Worldwide. (1999, November 17). OAG reveals results of business travel lifestyle survey. Yahoo.com. [On-line]. Available: http//biz.yahoo.com/prnews/99117/il_oag_tra_1.html.

Oklahoma State University. (1999). Institutional review board packet. (Available from the Office of Research Compliance, 203 Whitehurst, Stillwater, OK 74078)

Olweus, D. (1979). Stablility of aggressive reaction patterns in males: a review. Psychological Bulletin, 86, 852-875.

Pimentel, B. (1997). New federal campaign concentrates on drunk airline passengers. San Francisco Chronicle. [On-line]. Available: http://www.dui.com/whatsnew/drunkairlinepass.htm.

Poliafico, F. J. (1996). Alcohol in the aviation industry. Air Cabin Safety Update, 3, (6), p. 1-2.

Pontell, H.N., Salinger, L.R. & Geis, G. (1983) Assaults in the air: Concerning attacks against flight attendants. Deviant Behavior, 4, 297-311.

Powelson, R. (1999, February 12). Pay up, passengers: Senate committee oks higher fines for unruly passengers. ABC News.com. [On-line]. Available: http://204.202.137.111/sections/travel/DailyNews/unruly990212.htm.

Prentice-Dunn, S., & Rogers, R.W. (1982). Effects of public and private self-awareness on deindividuation and aggression. Journal of Personality and Social Psychology, 43, 503-513.

Prew, S.J. (1997). Restraining those passengers. Cabin Safety Update, 3, (4), p. 1-2.

Prew, S.J. (1997). Should the public be educated? Cabin Safety Update, 3, (11), p.1.

Prew, S.J. (1999, June). Training to combat air rage. Cabin Air Training Magazine, 34-39.

Reid, H. (1999). Reid bill calls for safer skies. United States Senator Harry Reid. [On-line]. Available: http://www.senate.gov/~reid/p-airrage.htm.

Reiss, P. T. (1998, December). Dealing with air rage. ICAO Journal, 53, (10) 13-15.

Reynolds, C. (1996, January 17). Flight attendants try to control drunken passenger. Source News and Reports. [On-line]. Available: http://sddt.com/files/librarywire/96wireheadlines/01_96/DN96_001_17/DN96_01_17_ci.html.

Reynolds, C. (1997, August 5). Couple accused of causing mayhem on flight plead innocent. Source News and Reports. [On-line]. Available: http://sddt.com/files/librarywire/96wireheadlines /01_96/DN96_01_17/DN96_01_17_ci.html.

Riding, V. (1998, Winter). Air rage: Is flightvu the answer? Flight Recorder, 3. [On-line]. Available: http://www.ad-aero.co.uk/Newslett/winter_flight_recorder.htm.

Riley, T. (1999, October 4). Air rage flares up: Mad fliers return. Ticked.com. [On-line]. Available: http://www.ticked.com/errtravel/errageback2.htm.

Sabini, J. (1992). Social Psychology. New York: Norton.

Safe and Friendly Skies Act of 1999 (introduced into the Senate), S. 1139, 106th Congress, 1st Sess. (1999).

Sanders, S.M. (1997). Port authority officers sworn in as U.S.marshals. Southwest Florida International Airport - Press Releases. [On-line]. Available: http://www.swfia.com/rswpress/1997/usmarshal.html.

Schonfeld, I.S. (1991, August). A longitudinal study of occupational stressors and depressive symptoms in first year female teachers. Paper presented at the 99th Annual Convention of the American Psychological Association, Washington, DC.

Sheffer, M. (1999, October). Changing attitudes toward inflight violence and developing workable solutions. Disruptive Passenger Miniconference. Cranebank, United Kingdom.

Shepherd, A. (1998, June 11). Flying tempers. ABC News.com. [On-line]. Available: http://abcnews.go.com/sections/travel/DailyNews/crackdown980611.html

Sigesmund, B.J. (1998, November 7). Attacks have airlines angry. Newsweek.com. [On-line]. Available http://www/dailydavos.com/nw-srv/issue/19_98b/ tnw/today/ps/s01fr_1.htm

Stevenson, J. (1997, May 5). Unruly passenger behavior poses increasing risk to safety. AirSafety Week. p. 8.

Strauss, A., & Corbin, J. (1990). Basics of qualitative research: Grounded theory procedures and techniques. Newbury Park, CA: Sage.

Stuart, P. (1992). Murder on the job. Personnel Journal, 71, 72-84.

Suvanto, M.H.S., & Partinen, M. (1994). The effects of four-day round trip flights over 10 time zones on the sleep-wakefulness patterns of airline flight attendants. Ergonomics, 37, 1461-1478.

Thompson, D. (1997, February 12). Careful with the flight attendants. Road Kill Diaries. [On-line]. Available: http://www.roadkilldiaries.com/html/carefulfeb10.htm.

Underwood, A., & Wingert, P. (1999, November 29). Stress in the skies. Newsweek. 39 - 42.

U. S. Code of Federal Regulations, 14 C.F.R. 121.573 (1999).

U. S. Code of Federal Regulations, 14 C.F.R. 135.121(c) (1999).

U.S. Department of Transportation (1994, August 25). Air carrier operations bulletins: Change. (Federal Aviation Administration, AFS-200 Publication No. 8430.17 Chg 80). Washington D.C.: U.S. Government Printing Office.

U.S. National Aeronautics and Space Administration (1999, August, 20). ASRS database report set: Cabin attendant reports. Aviation Safety Reporting System. Moffett Field, California.

U.S. Office of Personnel Management. (1998, February). Dealing with workplace violence: A guide for agency planners. (Office of Workforce Relations Publication No. OWR-09). Washington, D.C.: U. S. Government Printing Office.

Weiss, J. (1999, September 7). Flying in the age of rage. Salon.com Travel Diary. [On-line]. Available:http://www.salon.com/travel/diary/hest/1999/09/07/rage/index1.html.

Wheeler, E.D., & Baron, S.A. (1994). Who are the perpetrators? Violence in Our Schools, Hospitals, and Public Places. Ventura, CA: Pathfinder.

Whittington, R. & Wykes, T. (1989). Invisible injury. Nursing times, 84 (42), 30-32.

Wiersma, W. (2000). Historical research. Research Methods in Education: An Introduction. (7th ed.). Needham Heights, MA. Pearson Education Company.

Witham, D. (1997, May 1). Passengers are increasingly disruptive, flight attendants say. Seattle Times. [On-line]. Available: http://www.seattletimes.com/extra/browse/html97/altunru_050197.html.

Wolf, J. (2000, February 4). Airline yanks seats for leg room. The Daily Oklahoman, p. C1.

Zeichner, A., Pihl, R.O., Niaura, R., & Zacchia, C. (1982). Attention processes in alcohol mediated aggression. Journal of Studies on Alcohol, 43, 714-724.

Zillman, D. (1971). Excitation transfer in communication mediated aggressive behavior. Journal of Experimental Social Psychology, 7, 417-434.

APPENDIXES

APPENDIX A

NASA AVIATION SAFETY REPORTING SYSTEM (ASRS) FORM ARC #277 C

IDENTIFICATION STRIP: *Please fill in all blanks to ensure return of strip. NO RECORD WILL BE KEPT OF YOUR IDENTITY.*
This section will be returned to you.

(SPACE BELOW RESERVED FOR ASRS DATE/TIME STAMP)

TELEPHONE NUMBERS where we may reach you for further details of this occurrence:

HOME Area ____ No. _____ - _____ Hours____

ALTERNATE Area ____ No. _____ - _____ Hours____

NAME_____

ADDRESS/PO BOX_____

_____

CITY_____ **STATE**____ **ZIP**____

TYPE OF EVENT/SITUATION _____

_____

DATE OF OCCURRENCE _____

LOCAL TIME (24 hr. clock) _____

DO NOT REPORT AIRCRAFT ACCIDENTS AND CRIMINAL ACTIVITIES ON THIS FORM -- ACCIDENTS AND CRIMINAL ACTIVITIES ARE NOT INCLUDED IN THE ASRS PROGRAM AND SHOULD NOT BE SUBMITTED TO NASA. ALL IDENTITIES CONTAINED IN THIS REPORT WILL BE REMOVED TO ASSURE COMPLETE REPORTER ANONYMITY.

PLEASE FILL IN APPROPRIATE SPACES AND CHECK ALL ITEMS WHICH APPLY TO THIS EVENT OR SITUATION

REPORTER

- O Flight Attendant (FA)
- O Trainee
- O FA in charge
- O Off-Duty FA
- O Extra FA
- O Other_____

EXPERIENCE

Total years as Flight Attendant _____
Total years as FA with your current airline _____
Number of aircraft types currently qualified to work on _____
Percent of duty time in past year on aircraft type involved _____

FLIGHT INFORMATION

Type of Aircraft

(Make/Model) _____

number of seats_____ number of pax on board _____ number in cabin crew_____
number of exits: floor level _____ window _____ tailcone _____

Flight Segment

flight origin _____ destination _____ departure time _____

time since takeoff _____ hrs/mins nearest city/state (if known) _____

Cabin Activity (check all that apply)

- O boarding
- O deplaning
- O beverage service
- O meal service
- O cart service
- O tray service
- O movie
- O other _____
- O safety related duties, specify _____

OPERATOR

- O air carrier
- O commuter
- O corporate
- O charter
- O other _____

FLIGHT PHASE

- O predeparture
- O taxi
- O takeoff
- O climb
- O cruise
- O descent
- O approach
- O landing
- O gate arrival
- O other _____

WEATHER

- O clear
- O cloudy
- O rain
- O fog
- O turbulence
- O snow
- O thunderstorms
- O ice
- O unknown

LIGHTING

CABIN	OUTSIDE
O bright	O daylight
O medium	O night
O dark	

EVENT CHARACTERISTICS

Reporter's location in aircraft at time of event _____
Reporter's activity at time of event _____

Was a passenger directly involved in the event? O Yes O No

Was fire/smoke involved in the event? O Yes O No

Did this event result in an injury? O Yes O No
to passenger? O Yes O No
to crew? O Yes O No

Was there an evacuation during or as a result of this event? O Yes O No

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

NASA has established an Aviation Safety Reporting System (ASRS) to identify issues in the aviation system which need to be addressed. The program of which this system is a part is described in detail in FAA Advisory Circular 00-46D. Your assistance in informing us about such issues is essential to the success of the program. Please fill out this form as completely as possible, enclose in an sealed envelope, affix proper postage, and and send it directly to us.

The information you provide on the identity strip will be used only if NASA determines that it is necessary to contact you for further information. THIS IDENTITY STRIP WILL BE RETURNED DIRECTLY TO YOU. The return of the identity strip assures your anonymity.

AVIATION SAFETY REPORTING SYSTEM

Section 91.25 of the Federal Aviation Regulations (14 CFR 91.25) prohibits reports filed with NASA from being used for FAA enforcement purposes. This report will not be made available to the FAA for civil penalty or certificate actions for violations of the Federal Air Regulations. Your identity strip, stamped by NASA, is proof that you have submitted a report to the Aviation Safety Reporting System. We can only return the strip to you, however, if you have provided a mailing address. Equally important, we can often obtain additional useful information if our safety analysts can talk with you directly by telephone. For this reason, we have requested telephone numbers where we may reach you.

Thank you for your contribution to aviation safety.

NOTE: *AIRCRAFT ACCIDENTS SHOULD NOT BE REPORTED ON THIS FORM. SUCH EVENTS SHOULD BE FILED WITH THE NATIONAL TRANSPORTATION SAFETY BOARD AS REQUIRED BY NTSB Regulation 830.5 (49CFR830.5).*

Please fold both pages (and additional pages if required), enclose in a sealed, stamped envelope, and mail to:

NASA AVIATION SAFETY REPORTING SYSTEM
POST OFFICE BOX 189
MOFFETT FIELD, CALIFORNIA 94035-0189

DESCRIBE EVENT/SITUATION

Keeping in mind the topics shown below, discuss those which you feel are relevant and anything else you think is important. Include what you believe really caused the problem, and what can be done to prevent a recurrence, or correct the situation. (USE ADDITIONAL PAPER IF NEEDED)

CHAIN OF EVENTS
- How the problem arose
- How it was discovered
- Contributing factors
- Corrective actions

HUMAN PERFORMANCE CONSIDERATIONS
- Perceptions, judgments, decisions
- Actions or inactions
- Factors affecting the quality of human performance

APPENDIX B

REQUISITION OF CABIN CREW REPORTS FROM THE NASA AVIATION SAFETY REPORTING SYSTEM

December 13, 1999

NASA Aviation Safety Reporting System (ASRS)
Post Office Box 189
Moffett Field, California 94035-0189

To Whom It May Concern:

I am a graduate student at Oklahoma State University working toward a doctorate in Aviation Education. My dissertation topic is to determine situation-specific factors contributing to incidents of crewmember interference between January 1, 1994, and December 1, 1999. In order to complete my dissertation research, I am requesting all cabin crew reports (NASA ARC #277Cs) from the Aviation Safety Reporting System database for the above mentioned time period.

If there is a fee for this service, please contact me via e-mail and I will remit the fee immediately. My e-mail address is: Dian_Taylor@tsi.jccbi.gov. My phone number at home is 405/692-0814 and at work is 405/954-9690. I look forward to hearing from you and obtaining the requested reports.

Sincerely,

Dian Taylor

Dian Taylor
Instructional Systems Specialist
FAA Aeronautical Center
6500 S. MacArthur Blvd.
DTI-70, MPB, Rm 325
Oklahoma City, OK 73169

Taylor, Dian

From: Rowena Morrison [rmorrison@mail.arc.nasa.gov]
Sent: Wednesday, December 22, 1999 4:18 PM
To: dian_taylor@tsi.jccbi.gov
Subject: Cabin Crew Reports

December 22, 1999

Ms. Dian Taylor

Instructional Systems Specialist

FAA Aero Center

6500 S. MacArthur Blvd.

DTI-70, MPB, Room 325

Oklahoma City, OK 73169

Dear Ms. Taylor:

SEARCH REQUEST NO. 5850: "CABIN CREW REPORTS"

In response to your request of NASA's Aviation Safety Reporting System, we have enclosed 300 cabin crew reports since January 1, 1994. This report set represents all reports entered into the ASRS database for the years 1994 (four reports), 1995 (10 reports), 1996 (23 reports), 1997 (61 reports), and 1999 (58 reports). Data for 1999 are incomplete. The remaining 144 reports are from 1998 in which 388 reports were submitted to ASRS on this topic. At the time of this search, a total of 80,800 full-form reports have been entered into the ASRS database. Full-form reports include the reporter's narrative. Attached is an explanation of the coded information contained in your printout.

Please bear in mind that the ASRS reports are soft data. The reports are submitted voluntarily and are subject to self-reporting biases. Such incidents, in many cases, have not been corroborated by the FAA or NTSB.

We hope you find this information useful. Please note with care the attached caveat regarding statistical use of ASRS information and the point Ms. Connell makes in her covering memorandum to recipients.

We would appreciate any comments you have regarding the value of this service. If you have any questions or comments, please do not hesitate to contact us at (650) 969-3969.

Sincerely,

Carrie L. Ferguson

ASRS Database Specialist

Dr. Rowena Morrison

ASRS Research Coordinator

CLF

VITA

Paula Dian Taylor

Candidate for the Degree of

Doctor of Education

Thesis: IDENTIFICATION, DESCRIPTION, AND CATEGORIZATION OF INCIDENTS OF CABIN CREWMEMBER INTERFERENCE ABOARD U.S. AIR CARRIERS

Major Field: Applied Educational Studies

Biographical:

Personal Data: Born in Purcell, Oklahoma, August 7, 1950, the daughter of Mr. and Mrs. Gordon H. Sharp.

Education: Graduated from Wayne High School, Wayne, Oklahoma, in May 1968; received Bachelor of Science in Language Arts in Education degree and a Master of Education in Educational technology degree from the University of Oklahoma, Norman, Oklahoma, in December 1982, and December 1992, respectively. Completed the requirements for the Doctor of Education degree with a major in Applied Educational Studies in Aviation Education at Oklahoma State University, Stillwater, Oklahoma, in May 2000.

Experience: Pharmacy Assistant, Safeway Stores Incorporated, 1978 - 1987; Plant Assignment Specialist, General Telephone Company, 1988 - 1989. In January, 1989, began career with the Federal Aviation Administration and worked in a variety of positions until 1991. Legal Instruments Examiner, Federal Aviation Administration (FAA), Civil Aviation Registry, 1991-1994. Employee of Research and Special Programs Administration (RSPA) from 1994 to present. As an Instructional Systems Specialist for the RSPA, I plan, coordinate, develop, and instruct professional development training courses on a contractual basis for the National Highway Traffic Safety Administration (NHTSA).