

THE LEVEL OF JOB SATISFACTION OF AIRLINE
CATERING CHEFS AND COOKS

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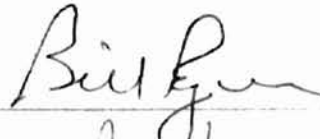
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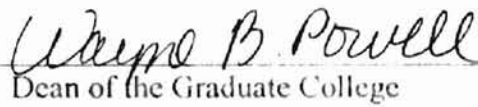
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CHAPTER I

INTRODUCTION

The food service industry is the largest employer in the United States with substantial growth in the food service field expected between now and the year 2005. The National Restaurant Association estimates that 2.5 million new restaurant jobs will be created by 2005 (NRA, 1995). The Council on Hotel, Restaurant and Institutional Education reports that in 1997, chefs earned an average salary of \$45,100 with a median income of \$34,700 (CHRIE, 1997). Chefs who understand the financial, scientific and culinary aspects of the job, as well as those who can lead a kitchen staff, are in constant demand.

Since turnover in the hospitality industry has been found to be as high as 240% (200 % more than in other industries), employee turnover is one of the largest operational difficulties facing hospitality employers (Woods & McCaulay, 1989; Malley, 1997). Researchers tend to understand turnover through job satisfaction (Browns, 1990; Porter & Steers, 1973). Many turnover theories view turnover in light of employee job satisfaction (Bluedorn, 1982; Mobley, Griffeth, Hand, & Meglino, 1979). People who have dissatisfaction with their jobs often try to find alternative employment. In 1994, Crampton and Wagner indicated a significant correlation between job satisfaction and turnover (Crampton & Wagner, 1994). Spector said that "this correlation is causal. Job dissatisfaction leads to turnover" (1997, p. 62). Job satisfaction makes it important to study further those aspects of the job environment that might be improved and thus

provide greater job satisfaction for chefs working in this industry (Greenberg & Glaser, 1980).

Job Duties in Airline Catering

Chefs create and prepare a variety of meals and desserts in restaurants, hotels, cruise ships, and in airline catering. Airline catering is an extremely dynamic industry. In spite of the dynamics of this industry, the basic international service system has not fundamentally changed in the last 50 years. Trayed meals served to customers seated in the airplane are still the norm in international travel (Jones & Kipps, 1995). Over 755 million people fly on commercial aircraft worldwide each year. About 9000 aircraft take off everyday, at approximate 1000 airports (McCool, 1995).

Unique Aspects of airline catering include chefs having: less chance of direct contact with consumer. In addition chefs have to serve a very high volume of food and beverage. Chefs also have to pre-produce foods that are then boarded onto the aircraft. They work in flight kitchens that operate 24 hours per day, 365 days per year. Chefs have strict limitations on the space & weight of food they prepare and the scheduled service they provide. Chefs have to handle and deal with an abundant diversity of food and customers (McCool, 1995).

Airline Industry

There are 1200 scheduled flights in the world and the airline industry caters to around 1.25 billion passengers a year which means US\$250 billion in revenue. The airline catering industry employs about 1.5 million people (Hanlon, 1996). Since the first airline food was served in 1919 on the route between England and France, airline catering has grown and changed. Chefs must be able to do more than properly prepare

and present food. They must understand traditions and factors influencing change (Hause & Labensky, 1995). Qualified chefs are desperately needed for the whole food service industry. Americans are eating out more than ever (on the average of four meals each week) and traveling via air more than ever (Jones & Kipps, 1995). There is a steady need for chefs, and because airline travel is so frequent and common, there is a particular need to retain airline chefs (Malore, 1998).

Purpose of Study

The purpose of this study was to measure the level of job satisfaction of airline catering chefs and cooks in Korea and US. The specific objectives were:

1. To measure the level of job satisfaction among airline catering chefs and cooks.
2. To determine if there is a difference in job satisfaction between airline catering chefs and cooks in Korea and airline catering chefs and cooks in the United States.

Statement of the Problem

Since turnover in the hospitality industry has been found to be as high as 240%, every possible effort should be made to retain current trained employees (Qume, 1991). Measuring current employees' job satisfaction is one of the most common ways to understand turnover in the workplace (Browns, 1990; Porter & Steers, 1973). Only little information is known regarding the level of job satisfaction of airline catering chefs and cooks.

Research Questions

Research Question 1. Higher pay increases overall job satisfaction among airline catering chefs and cooks in Korea and the United States.

Research Question 2. Korean and United States airline catering chefs' and cooks' perceptions of their jobs as having promotional opportunities increases overall job satisfaction.

Research Question 3. A positive relationship between Korean and United States chefs and cooks with their supervisors increases job satisfaction in airline catering chefs and cooks.

Research Question 4. The perception of Korean and United States airline catering chefs and cooks as having good benefits increases job satisfaction in airline catering chefs and cooks.

Research Question 5. Airline catering chefs' and cooks' perception of their jobs as having contingent rewards increases job satisfaction in airline catering chefs.

Research Question 6. The perception of Korean and the United States chefs and cooks working under complicated operating conditions decreases job satisfaction in airline catering chefs and cooks.

Research Question 7. Positive relationships between chefs and cooks and their coworkers increases job satisfaction in airline catering chefs and cooks.

Research Question 8. A positive perception of the prestige of chefs' and cooks' jobs in Korean and United States airline catering increases job satisfaction in airline catering chefs and cooks.

Research Question 9. The perception of Korean and United States chefs and cooks as working in an organization with clear communication increases job satisfaction for airline catering chefs and cooks.

Research Question 10. There is no significant difference in job satisfaction between airline catering chefs and cooks in Korea and airline catering chefs and cooks in the United States.

Limitations

This study is limited to chefs of Korean Airline Catering in Korea, Asiana Airline Catering in Korea, and Dobbs' International Services, Inc. in the United States. The results of this study cannot be generalized beyond this population.

This study is being conducted in the summer which is a very busy time for the airline industry thus responses may reflect a very "high volume of meals" perspective.

The other limitation of this study is that airline food means hot or cold trayed meals predominantly served on international flights or long-distance domestic air-trips. No pretzels and peanuts, or bagged meal kitchens will be surveyed in the study.

Definitions of Terms

For this study, the following terms were defined.

1. Job Satisfaction: Job Satisfaction is the degree to which people like their jobs and simply how people feel about their jobs and different aspects of their jobs (Spector, 1997). Job satisfaction is the feelings a worker has about his/her job (Smith, Kendall & Hulin, 1969).

2. **Inflight Foodservice:** Inflight Foodservice is the part of the foodservice industry that is concerned with the provision of meals and beverages served to passengers on board aircraft (Jones & Kipps, 1995).
3. **Airline Industry:** An established system of aerial transportation (Webster's, 1993).
4. **Catering:** Providing prepared food and service (Webster's, 1993).
5. **Chef:** A person skilled in food preparation who has charge of the kitchen and kitchen personnel in a large establishment, planning menus, ordering foodstuffs, directing and assisting cooks and preparing special dishes (Webster's, 1993).
6. **Airline Catering Chef:** A chef who is working in an airline catering kitchen. In this study, an airline catering chef means a chef or a cook who has a culinary federation certificate from a culinary association and who is working in an airline catering kitchen.
7. **Airline Foods:** In this study, airline food means hot or cold trayed meals predominantly served on international flights or long-distance domestic air-trips. No package meal, pretzels, and peanuts.
8. **Contingent Rewards:** Contingent rewards are rewards that an employee gets based on contingent good performance. These can be things like bonuses and merit raises, but they can also be appreciation and recognition for good work. This is different from other things that might be considered rewards, such as pay and benefits because these are not based or "contingent" upon performance. This term comes from behaviorism (P. Spector, personal communication, November 5, 1999).

CHAPTER II

REVIEW OF LITERATURE

Introduction

Job satisfaction has been an essential issue for the hospitality industry for many years. Managers in the hospitality industry have identified that employee turnover rate is one of the most difficult issues facing the industry (Ghiselli & Ismail, 1996). The National Restaurant Association estimated the annual turnover rate in foodservice has been approximately over or close to 100% for many years (NRA, 1990-1997). To study employee turnover, researchers commonly endeavor to relate turnover to job satisfaction (Barrows, 1990; Porter & Steers, 1973). Many studies found that the more dissatisfied employees are in their jobs the higher the desire to quit and visa versa (Mobley, Griffeth, Hand, & Meglino, 1979). IBM conducts a job satisfaction survey every year. IBM researchers found that high level of employee satisfaction at IBM contributes to lower employee turnover and an outstanding company reputation (Spector, 1985).

Because airline travel is becoming the key transportation for the 21st century, many studies need to be done for the airline catering segment of the hospitality industry including job satisfaction of airline catering employees (McCool, 1995). Following are some job satisfaction theories and a summary of airline catering industry information that has been recorded.

Job Satisfaction

Job satisfaction is the most frequently studied variable in organizational behavior research. The foundation of modern job satisfaction research was laid in the 1950's and 1960's and was largely based on Maslow's (1954) work. This work has been also referred to as *Maslow's Theory of Needs*.

Maslow's Theory of Needs

In 1954, Maslow identified and stratified five categories of needs in humans. The first fundamental need Maslow identified is the basic physiological need. It is comprised of those factors that are needed for immediate physical sustenance such as food, water, and sleep (Maslow, 1954). Maslow then identified the second level as the need for safety and security. This level in the hierarchy of needs is concerned with maintenance of level one needs through time, and is concerned with security, stability, and absence from pain, threat, or illness (Maslow, 1954). At level three, the need for love and a sense of belonging emerges as the need that demands the most effort. This need fills some of a person's emotional needs for love, affection, and a sense of belonging (Maslow, 1954). At level four in the hierarchy, the esteem need emerges. This need provides for personal feelings of achievement, recognition, prestige and self-esteem (Maslow, 1954). At the fifth and highest level, self-actualization, there is the need people have to develop and grow. "The desire for self-fulfillment. The tendency of a person to become actualized in what he is potentially is the need at this level. The desire to become more and more of what one is, to become everything that one is capable of becoming is the need at this level" according to Maslow (1954).

Maslow theorized that the first level of needs has to be satisfied before the second level becomes important to an individual. The second level needs satisfaction before the third level is apparent, and so on. In such a hierarchy one merely has to determine the level of need an individual is responding to in order to predict what rewards would be valued by that person.

While conceptually brilliant, Maslow's model has only been partially accepted by subsequent research. Strong evidence indicates that physiological and security needs must be met before individuals attempt to fulfill higher need categories. Yet, very little evidence exists to support the relative hierarchy of the higher three needs. Lawler (1982) and Alderfer (1969) suggested that the various need levels are interlinked, and that failure to attain fulfillment on a higher level can increase the relative importance of a lower need. Alderfer (1969) also indicated that all levels of needs could be active simultaneously. Thus, a reward can gratify more than one need. For example, Lawler (1971) found that pay has the ability to satisfy esteem and security needs as well as physiological needs.

Herzberg's Two-Factor theory relates Maslow's Theory of Needs with job satisfaction (Herzberg, 1959).

Herzberg's Theory of Job Satisfaction

Based on Maslow's hierarchy of needs, Herzberg (1959) developed a Two-Factor theory of job satisfaction. Herzberg categorized working condition variables into two factors: the hygienic factors and motivating factors.

Hygienic factors are described as company policies, working conditions, pay, relations with co-workers, and other job characteristics that do not vary with worker performance. Such hygienic factors correlate with lower hierarchy needs in Maslow's model. Motivating factors, conversely, are inherent to the individual worker, specific work tasks and recognition of achievement. Motivating factors influence worker effort, and determine the quality of work performed and job satisfaction level achieved. Motivating factors such as feelings of achievement, recognition, advancement, and growth potential, are characteristics that vary with a worker's job performance, and represent Maslow's higher need levels.

Herzberg theorized that adequate hygienic factors maintain a stable work environment. When perceived as inadequate, such factors result in decreased job satisfaction and a destabilized work environment.

In 1968, Porter and Lawler linked Maslow's Theory of Needs with Herzberg's Two-Factor theory into a sequential circuit. This sequential circuit linked effort, ability, performance, rewards, satisfaction, and further effort.

Porter-Lawler Dynamic Model of Motivation

Utilizing concepts from both Maslow and Herzberg, Porter and Lawler (1968) integrated worker needs and rewards into a model that includes effort, ability, performance, reward type, and satisfaction (see Figure I). This model categorized Herzberg's motivating and hygienic factors as intrinsic and extrinsic rewards, respectively. The value attached to those rewards is determined by the worker's place within Maslow's need hierarchy.

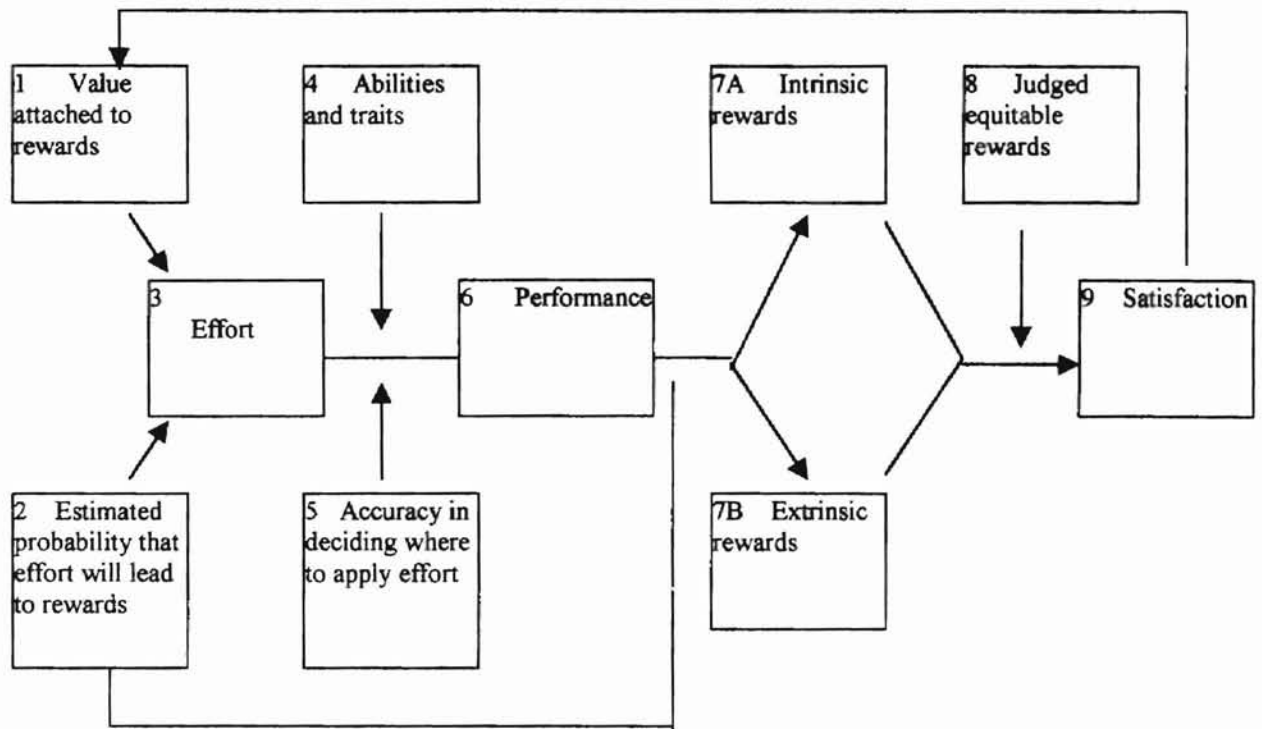


Figure 1. A Dynamic Model of Motivation (adapted from Porter and Lawler, 1968)

In this model of motivation, as shown in Figure 1, value attached to rewards (block 1) and estimated probability that effort will lead to rewards (block 2) are viewed as determinants of the degree of effort a worker puts forth (block 3). Performance is determined not only by effort, but the workers ability and proper application of effort as well (blocks 4 and 5). A closer link between performance and satisfaction via intrinsic rewards rather than extrinsic rewards is implied in this model. Intrinsic rewards directly obtained by carrying out tasks, such as feelings of accomplishment, deserve recognition, bonuses or promotions have a more immediate effect upon performance. Extrinsic rewards (such as wage, pension, and work conditions) also influence performance by

providing feedback that the employee's performance level is acceptable enough to maintain employment. In this model if the appropriate rewards were received and judged as having been equitable, job satisfaction is increased and the perceived value of the reward is enhanced.

Definition of Job Satisfaction

There are many definitions for the term of job satisfaction. Table I shows some of these definitions.

TABLE I
DEFINITIONS OF JOB SATISFACTION

Locke	1976	A pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences. Job satisfaction results from the appraisal of one's job as attaining or allowing the attainment of one's important job values, providing these values are congruent with or help to fulfill one's basic needs (Locke, 1976, p 1300, 1319).
Spector	1985	Job satisfaction is simply how people feel about their jobs and different aspects of their jobs. It is the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs (Spector, 1985, p. 2).
Efraty and Sirgy	1990	Job satisfaction refers to one's affective appraisal of various job dimensions such as the work itself, supervision, pay, promotion policies, and co-workers (Efraty & Sirgy, 1990, p. 34).
Loscocco and Roschelle	1991	The overall affective orientation to the job (Loscocco & Roschelle, 1991, p. 183).
Agho, Price, and Mueller	1992	The extent to which employees like their work (Agho, Price, & Mueller, 1992, p. 185).

Measurement of Job Satisfaction

Many measures of job satisfaction exist, but interviews and survey questionnaires are most frequently used (Spector, 1985). Although interviews are expensive and time consuming, researchers can get more extensive information from this method. Surveys are easy to conduct and relatively inexpensive. In a short time period, one can get large number of surveys completed. Spector (1985) predicted that using one of the existing methods could be the easiest way to measure job satisfaction. He also detailed five main advantages of using an already existing job satisfaction scale. "First, many of the available scales cover the major facets of satisfaction... second, most existing scales have been used a sufficient number of times to provide norms ... third, many existing scales have been shown to exhibit acceptable levels of reliability, fourth, their use in research provides good evidence for construct validity, and finally, the use of an existing scale saves considerable cost and time necessary to develop a scale from scratch." (Spector, 1985, p. 6-7). The following sections overview six job satisfaction instruments including four faceted scales and two global satisfaction scales. The four faceted scales are the Minnesota Satisfaction Questionnaire, Job Descriptive Index, Job Diagnostic Survey, and the Job Satisfaction Survey. The two global satisfaction scales are the Michigan Organizational Assessment and Job in General Scale.

The Minnesota Satisfaction Questionnaire

The Minnesota Satisfaction Questionnaire (MSQ) has been very popular among researchers. Weiss, Dawis, England, and Lofquist developed the MSQ in 1967. MSQ is one of the faceted scale surveys and has two forms, a 100-item long version and a 20-

item short version. Both forms cover 20 facets. The long version has five items per facet. Most researchers who use the short version combine all 20 items into a total score or compute extrinsic and intrinsic satisfaction subscales from subsets of items. The twenty facets include activity, independence, variety, social status, supervision (human relations), supervision (technical), moral value, security, social service, authority, ability utilization, company policies and practices, compensation, advancement, responsibility, creativity, working conditions, coworkers, recognition, and achievement (Weiss, Dawis, England, & Lofquist, 1967).

Job Descriptive Index

Smith, Kendall, and Hulin developed the Job Descriptive Index (JDI) in 1969. JDI has been a very popular facet scale with organizational researchers. JDI assesses five facets: work, pay, promotion, supervision, and coworkers. There are a total of 72 yes or no questions with 9 or 18 items per subscale. After each question, short explanations about the facets are provided both in positively worded and negatively worded manners. Since JDI is copyrighted and a fee is required for using the JDI, researchers need to get permission from Patricia C. Smith, Department of Psychology, Bowling Green State University, Bowling Green, OH 43403. Researchers and developers are still trying to improve the JDI's reliability and validity (Roznowski, 1989).

Job Diagnostic Survey

Hackman and Oldham developed the Job Diagnostic Survey (JDS) in 1975. The purpose of JDS is to study the effects of job characteristics on people (Hackman &

Oldham, 1975). JDS contains subscales such as the nature of the job and job tasks, motivation, personality, psychological states (cognition and feelings about job tasks), and reactions to the job. Each subscale has two to five questions on a 7-point scale ranging from "Extremely dissatisfied" to "Extremely satisfied".

Job Satisfaction Survey

Paul E. Spector developed the Job Satisfaction Survey (JSS) in 1985. JSS has a total of 36 questions and 9 subscales for pay, promotion, supervision, benefits, contingent rewards, operating procedures, coworkers, nature of work, and communication. Its coefficient alpha is .91 and Test-Retest reliability is .71. Eighteen questionnaires are negatively worded and the rest are positively worded. Each item can be answered from 1 (disagree very much) to 6 (agree very much). The JSS is provided free for noncommercial educational and research purposes.

The Michigan Organizational Assessment

Cammann, Fichman, Jenkins, and Klesh developed the Michigan Organizational Assessment (MOA) in 1979. This is one of the global satisfaction scales. MOA is simple and short. It contains a three item overall satisfaction subscale. Although the author reports an internal consistency reliability of .77, Jex and Gudanowski found higher reliabilities in 1992. Items from the Michigan Organizational Assessment questionnaire satisfaction scales are in Table II (Spector, 1985).

Table II.

Items from the Michigan Organizational Assessment Questionnaire
Satisfaction Scales (Spector, 1985).

-
1. All in all, I am satisfied with my job.
 2. In general, I don't like my job.
 3. In general, I like working here.
-

The responses are numbered from 1 to 7: Strongly disagree, Disagree, Slightly disagree, Neither agree nor disagree, Slightly agree, Agree, Strongly agree.

Job in General Scale

Ironson, Smith, Brannick, Gibson, and Paul developed the Job in General Scale (JIG) in 1989. JIG was designed to measure overall job satisfaction instead of facets of job satisfaction. JIG contains 18 items. Each question is simple and short, with an objective phrase related to the job in general rather than facets. It has three possible answers such as agree (yes), are not sure (?), or disagree (no). The authors report internal consistency coefficients from .91 to .95.

Using all these instruments above, many industries have measured job satisfaction. There has been much job satisfaction research in the area of education and hospital employees, but very little information has been gathered regarding the level of job satisfaction of employees in the airline catering industry. Looking at some information about the airline catering industry may give more understanding into this hospitality segment.

Airline Catering

“Hospitality Industry” means not only hotel and restaurant operations but also club, cruise, catering, and tourism businesses. Airline catering is a dynamic segment of the hospitality industry. In order to study airline catering, it is important to understand (1) the history of the airline catering industry, (2) divisions of the airline catering structure, and (3) the unique aspects of airline catering compared with other restaurant or hotel food service systems. In spite of the dynamics of the airline catering industry, the basic service system has not fundamentally changed in the last 50 years. Trayed meals served to customers seated at the airplane are still the norm in international travel (Jones & Kipps, 1995). Over 755 million people fly on commercial aircraft worldwide each year. About 9000 aircraft take off everyday, at approximately 1000 airports (McCool, 1995).

There are 1200 scheduled airlines in the world and the industry caters to around 1.25 billion passengers a year. This results in US \$250 billion in revenue and employment for about 1.5 million people (Hanlon, 1996). “The airline industry is a key element in the ‘world’s largest industry’, travel and tourism. The airline industry accounts for approximately 10 percent of world Gross Domestic Product” (Hanlon, 1996, p. 9). Since the first airline food service began in 1919 on the route between England and France, airline catering has grown and changed very little. Change that has taken place has been influenced by the change in passengers’ tastes (Jones & Kipps, 1995). Hanlon (1996) indicates that incomes, fares and service are the three fundamental factors that affect passengers’ demand. Some consumer groups desire inclusion of healthy food and

vegetarian food, which have a direct affect on airline menus. But, in general today's airline food service remains similar to its origins.

History of Airline Catering

Europe

In 1919, regular airline passenger services started for the first time between England and France. During the 2-hour flight, passengers were served tea. That was the first beverage service on airplanes for passengers (McCool, 1995).

Some airline industries claim that KLM was the first airline caterer. KLM was founded in the Netherlands on October 7, 1919 and started to serve pre-packed meals on the flights between London and Paris only four days later on October 11, 1919. KLM was the world's first commercial airline and the first meal caterer on airplanes. From this time on, other European airline industries began to emerge. Sabena Airlines of Belgium was founded in 1923 and Imperial Airways formed in 1939 (McCool, 1995).

United States

In the United States, airport foodservice systems helped satisfy air-travelers' hungers with simple luncheon counters. Local diners near airports dominated airport foodservice emphasizing simplicity and quick service. As the airline industry expanded with the success of commercial air travel, airline passengers demanded more facilities and higher quality of foodservice on their sky journey (McCool, 1995).

During the 1930s, many airline industry operators started to have more convenient service systems for the air-passengers. One of them was C. R. Smith, the founder of

American Airlines. He created Sky Chefs in 1940 and Sky Chefs lunch counters and coffee shops sprang up at most American Airlines terminals (McCool, 1995). While Sky Chefs expanded across the country, Dobbs International Service, Inc. launched their airline catering business in 1941 headquartered in Memphis, Tennessee. Dobbs International Service, Inc. is now the largest independent airline catering company in the world (Jones & Kipps, 1995).

Before World War II

After World War I, former military pilots created airlines for the first time with the purpose of mail delivery rather than passenger transport. As the number of passengers gradually increased, passengers had to share open cockpits with the mail. No foodservice was provided for human passengers. Pilots and other members of the crew might share their lunch boxes and coffee with hungry passengers (Hanlon, 1996).

In 1936, American Airlines introduced the first airline galley in their DC-3 aircraft. Because this galley had no electrical power for heating food and brewing coffee, all hot food and beverages were boarded at ready-to-serve temperature in thermoses. In the beginning of airline food service history, the attendants on passenger flights were stewards rather than stewardesses (McCool, 1995).

In the 1930s, Pan American Airways furnished expensive galleys on their overseas flights but they had no electric power for heating or cooling food either. However, one of Pan American Airways' aircraft, the Boeing 314, was equipped with a glycol circulating system so that stewards could heat food inside the aircraft right before they served hot meals. A pipe containing glycol went to one of the clipper's four engines,

which heated the glycol, then, in turn, heated water in the galley. Unfortunately, once the engine stopped, the whole glycol circulating system became useless. These flying clippers made a dream come true by providing a means to serve fresh coffee on board. However, refrigeration systems were not yet developed because of weight limitations. There was a minimum amount of ice available for cold food and beverages (McCool, 1995).

There were many obstacles faced by the airline catering industry. One of these was the federal government's regulation and contracts. In 1934, President Franklin Roosevelt canceled all federal airmail contracts. As the result of his action, the airlines lost their primary customer and realized that an emphasis on passenger service instead of mail delivery was necessary.

By the mid-1930s, airlines started to recognize the need for better inflight foodservice in both quality and price. As airline competition increased, United Airlines was the first company to realize the marketing potential of inflight foodservice as a competitive advantage (Jones & Kipps, 1995).

After World War II

The impact of World War II on the industry was not only in developing new aircraft, but also in improving inflight foodservice. One of the biggest reasons for rapid development in inflight foodservice was the capability of generating electric power during flight. In aircraft equipped with electric power systems on board, stewards and stewardesses were able to serve hot food hot and cold food cold. At the galley, fresh

coffee could be brewed. Since food was now available, generally, the length of flight could be extended. Other postwar developments included the holding oven, automatic coffee brewer, convection oven for frozen meals, the plug-in tray table, on-board dishwasher, and a tray carrier. The plug-in tray table eliminated the necessity of a pillow or tray lid under the tray to lift up meals to a comfortable level to eat. New tray carriers reduced storage space requirements for on-board trays and provided effective refrigeration with provision for dry-ice slabs (McCool, 1995).

By 1950s, new jet aircraft made it possible to carry heavy equipment and large boarding packages. Hot thermoses had been changed to hot food packages. And, in the 1970s, airlines used a high-lift truck for loading food and beverages into the 747 (Hanlon, 1996; McCool, 1995).

Worldwide Partnerships in Airline Catering Industry

Today there are several major firms in the airline catering industry including LSG Lufthansa Service/Sky Chefs, Caterair International, Ogden Aviation Services, Dobbs International Services, Inc., and Gate Gourmet International a conglomerate firm in Europe. These airline catering partnerships are spreading worldwide. An example is Caterair International which operates 118 kitchens around the world, in twenty-six countries. Once a small airline catering company it has contracted with one of the large inflight firms mentioned above. Most airline catering operational information, computer systems, and regulations are related to one of the highly recognizable organizations such as Food and Drug Administration (FDA), and International Flight Catering Association (IFCA). The benefits of having contracts with larger airline catering firms include

reducing the effort and time for market analysis, development of operational computer system, and company reputation (Jones & Kipps, 1995).

Emergence of frozen food

In 1945, Pan American Airways invented the precooked frozen entrée for its transoceanic flights. It was a very sensational issue to the foodservice industry and also to chefs. Many airlines adopted this new precooked frozen entrée, because it is very easy to change menus and to use in any catering system. These entrees could be thawed or heated in convection ovens both on board and on the ground. However, the emergence of precooked frozen entrée was threatening to the security of airline catering chefs (McCool, 1995).

In spite of Pan American Airways' careful research, initial precooked frozen food received very low acceptance because of its quality. This bad public-opinion census put Pan American Airways in a serious situation. They were obliged to reduce the use of precooked frozen entrées. Pan Am decided that the reason for the failure of precooked frozen entrées was not the delivery system but the food quality. To solve this situation, Pan Am established its own frozen meal production facility. TWA also started to produce its own frozen food in New York. Pan Am's precooked frozen meals were shipped to airports around the world (McCool, 1995).

Future Trends of Airline Catering

In the past 50 years, the basic food service method has not been changed very substantially. Basically, seated passengers are served trayed meals with limited menu

variety and service space requirement. However, there will be significant changes in the future. Production systems, operational computer systems and other technology will affect the industry (McCool, 1995). In 1995, Jones and Kipps predicted five major factors that will cause changes in airline catering industry: customer trends, aircraft design, food and catering technology, information technology, and supply chain alliances (Jones & Kipps, 1995).

With growing concern for healthy eating habits, changes in customer trends include the increasing demand of vegetarian meals and low fat meals. The menu planning department or team must pay attention to this group of customer trends. There are some other factors that impact customer trends. These include the entertainment experience and service, such as the variety of music channels and on-board movie films (Jones & Kipps, 1995).

Aircraft design has influenced inflight catering for a long time. The size and design of aircraft automatically requires different logistics for planning, loading procedures and service routines. As new devices are introduced, aircraft interiors have been changing continuously. For example, some business class seats can be adjusted in width and rake of the seat. Waste compactors and newly designed ovens have changed the inside of galleys in both space and convenience (Jones & Kipps, 1995).

Information technology is as important as food production in the airline catering industry. Because, airline catering needs to handle and store millions of items of data such as the number of customers and different menu requirements, flight codes, departure times and loading procedures, special orders for each flight, weather conditions, etc. All of this information and any changes must be announced to caterers with enough time to

prepare. Properly used information systems and computerized food production systems reduce labor costs and improve the level of efficiency in airline catering operation (Jones & Kipps, 1995).

The relationship among airlines, caterers, suppliers, manufacturers, handling agents, etc, is also big part of the changing factors of airline catering. To survive in the highly competitive global-market, a strategic alliance with other segments of industry is recommended (McCool, 1995).

Another current emphasis on the airline catering industry is to attract first-class and business-class customers. Airlines try to give the best service for these target segments as well as overall public awareness of the company's high quality service image (McCool, 1995). But for the coach class, many catering companies have started to reduce food cost as well as amount of food and service. This trend of coach class service triggered hotels to have a new marketing segment. Hotels near Chicago O'Hare Airport have inflight menus for their customers. If customers give hotels their orders at least 2 hours prior to their flight, the hotels deliver decorated food boxes to their rooms (NRA, 1999).

The Airline's Foodservice Division

Structure & Responsibilities

Each airline has a department in charge of foodservice for passengers. The title of this group of people may vary depending on the size of company and other reasons. These divisions are referred to as the catering division, dining service department, or food and beverage division. Generally, this department's responsibility includes (1)

developing menus, (2) developing recipes, (3) developing specifications for all products used, including foods, beverages, and suppliers, (4) determining packaging and presentation specifications, (5) determining crew meal menus and specifications, (6) negotiating purchasing contracts with suppliers for items to be purchased directly by the airline or by the caterer for the airline, (7) determining meal and snack service policies for flights, (8) managing inflight equipment logistics, (9) determining meal service procedures, (10) negotiating service contracts with inflight caterers, (11) interfacing with inflight caterers, (12) developing budgets, and (13) conducting food and beverage service cost analyses (McCool, 1995, p.94).

Menu Development Process

Usually, each airline has its own menu for each route. Airline caterers do not have any obligation to set up menus for passengers unless airlines ask caterers to suggest new items or menus. Once menu planning is finished and accepted by the airlines, then, caterers precisely follow the fixed menu for each flight and each class (McCool, 1995).

Airline caterers have a growing opportunity to create menus to suggest to the carriers. Some airlines like ethnic food for their international flights with creativity from caterers. Suppliers are also becoming to be a part of the menu planning team. In the process of menu development, suppliers conduct product research or have test kitchens with product development expertise in order to more closely meet the specific requirements of airlines. The suppliers, for example, often have several suggestions for food items which are best in a particular season or which minimize excess waste and weight (McCool, 1995).

After the menu decision, all information such as identification of every food and beverage item, class flight number, and so on must be shown in written form so caterers and airlines have clear definitions and so they understand each other regarding the final food tray and services. Some airlines change menus each month and others change them seasonally. Generally, airlines rotate their menu cycles four to seven times per year. Sometimes caterers are asked to rotate only the first-class menu during a certain time period.

Preparing crew meals is not easy. The crews (pilots, flight officers, and flight attendants) can have meals at the same time passengers are served. Pilots and flight officers' meal choice levels are first-class level or upper business-class level. Flight attendants normally eat whatever is left over after passenger meal service time. All airlines have extremely specific menu specifications for crew meals (McCool, 1995).

Galley

The galley of an airplane has strict space and weight limitation. Each aircraft has its own allowance of weight and space. Caterers, however, can recognize almost every different type of galley with the aircraft's tail number (McCool, 1995).

Fixed galley structures are the framework within which the caterer must operate. Such things as plumbing, panels and work surfaces, countertops, shelves, carts, ovens, liquid containers, and coffee machines affect what can be done (McCool, 1995).

Waste Management

Waste and liquid effluent requires treatment to disperse them back into the environment in a harmless form. Airlines are becoming increasingly sensitive of the need to minimize the environmental impact of their activities, but the waste produced by flight meal production and on-board airline service should be seen in the context of total pollution loading (McCool, 1995). Spent fuel emission and noise pollution are more noticeable, and are probably a more serious problem. Needless to say, present efforts to recycle waste are likely to intensify; companies can ill afford the publicity consequences of ignoring environmental issues, and in any case the cost of waste disposal is climbing steadily, making recycling an increasingly economical proposition (Jones & Kipps, 1995).

Unique Aspects of Airline Catering

Airline catering has many similarities with other catering such as hotel catering or local restaurant catering. However, there are some unique aspects that can be shown in airline catering. McCool (1995) summarized airline catering's characteristics. She stated that there is limited opportunity for contact between food production personnel and passengers who eat the food products. The caterer's customer is not the one who consumes the products. There is heavy reliance on market research, consumer eating trend reports, and other such data as the determinant of menus served. A very high volume of foods and beverages must be handled by any one foodservice operation. Products served by an airline are prepared by multiple caterers in diverse locations. Caterers must prepare products in accord with very rigid specifications to achieve product

consistency for the customer. There are unusually long holding times between the time the finished products leave the production kitchen and when they are actually consumed by the airline passengers. The meals produced by the caterer are often served in a location that may be far from the caterer's kitchen. The caterer generally does not see the garbage (or what was actually eaten) from the meals prepared and provided by the caterer's kitchen. There is a zero tolerance level for errors in the products prepared and the amounts boarded onto the aircraft. The scheduled service time for products is often changed on very short notice to the caterer, yet the caterer must meet the new scheduled time. Food products used must be able to withstand severe handling, transport, and storage conditions without a significant loss in quality. All foods, beverages, service-ware, and equipment must fit into the designed storage spaces in the aircraft galleys. The foods, beverages, service-ware, and equipment cannot exceed the weight allocated for these items. Most inflight catering kitchens must operate 24 hours per day, 365 days per year. And finally, inflight caterers must meet their obligations for product quality and service times despite the uncertainty of conditions such as the weather or airline mechanical problems (McCool, 1995).

Summary

From 1919 until today, the airline catering industry has been gradually changing. Since airlines started to operate at the beginning of this century, the airline catering industry is still relatively a young segment of the hospitality industry. There are some differences between European airline catering and American airline catering. However, as we see this industry with worldwide partnerships, it seems to be becoming more

similar as well as more competitive in terms of catering system facilities, food production techniques, and food and service quality. The airline catering industry's concept of diversity (food and customers), concept of nationality, and concept of cultural background shall diminish as the industry grows. It will be more helpful to understand airline catering industry as a world-wide business and growing future global industry.

CHAPTER III

METHODOLOGY

Introduction

This chapter includes the research design, subjects, data collection, instrumentation, survey procedures, and data analysis used in this study.

Research Design

“Descriptive research involves collecting data in order to test hypotheses or to answer questions concerning the current status of the subjects of the study” (Gay, 1992, p. 217). The main objective of descriptive research is describing, recording, analyzing and interpreting conditions that currently exist. Survey research is one method of conducting descriptive research. Survey research can study a whole population or selected samples of the population (Kerlinger, 1986). The research in this study was carried out through the use of surveys. Both mail and fax delivery media was used.

Participation

The study participation was limited to airline catering chefs and cooks in Dobbs International Services, Inc. (the United States) and Korean Airlines Catering & Asiana Airlines Catering (Korea). Dobbs International Services, Inc was chosen for the United States' participation group because until June 30, 1999, it was the largest independent airline catering firm in the United States (McCool, 1995). However while the survey was being conducted on July 01, 1999, Dobbs' merged with Gate Gourmet which is the largest

airline catering company in the world (Cox, 1999). The total population of chefs and cooks in Dobbs International Services, Inc. was 180 at the time of the study (before starting the survey). For Korean subjects, Korean Airline Catering and Asiana Airline Catering was chosen, because this study's researcher had worked for Asiana Airline catering and had a good relationship with Korean Airline Catering. Other reasons to choose these two companies in Korea is that these are the only airline catering firms in Korea. Korean Airlines Catering and Asiana Airlines Catering had total population of 131 chefs and cooks at the time of the study. Data was collected from each group (the United States and Korea) in order to test the hypotheses. Because the whole target population of this study is 311, sampling was not necessary.

Data Collection

Planning and Development

Planning and developing for the research began in the spring of 1999 and continued through the summer of 1999. Data collection procedures and data analysis techniques appropriate to test the research questions were selected at that time.

Instrumentation

The research instrument (Appendix B) consisted of two parts. Part one contained the Job Satisfaction Survey (Spector, 1985) and part two contained demographic questions.

The job satisfaction questions for part one were selected Job Satisfaction Survey (JSS) (Spector, 1985). Spector developed the JSS to study the level of job satisfaction for

human service personnel using a simple worded questionnaire. Because it was simply worded, it was applicable to hospitality industry personnel. In addition, the JSS had been normed and validated on human service personnel in many different countries (United States, Jamaica, Hong Kong, Singapore, and Dominican Republic) (P. Spector, personal communication, June 28, 1999). The JSS consists of thirty-six evaluative questions. One half of the questions are negatively worded and the rest are positively worded. Each item is answered from 1 (disagree very much) to 6 (agree very much). Spector narrowed down feelings about the job into nine subscales with four statements for each scale. The nine subscales include pay, promotion, supervision, benefits, contingent rewards, operating procedures, coworkers, nature of work, and communication. The JSS has a reliability coefficient .91 and test-retest reliability .71 (Spector, 1985). Overall job satisfaction is obtained by combining the satisfaction scores of all nine subscales. Because each item's score can range from one to six, each individual subscale can range from four to twenty-four. Thus, a total score on the JSS can range from thirty-six to two-hundred-sixteen. Spector gave permission for free use of his JSS to researchers who have an academic purpose thus this instrument was selected.

Demographic information for the survey part two was similar to that used by Liu (1992) in a study of quality of work life assessment of Oklahoma dietitians. It was adapted for chefs and cooks. Demographic information included: gender; age; nationality; current job title; highest level of education; employment status; years employed in chef and cook position; years employed in the company; area of work; types of employment facility; operation size (average meal per day); hours of kitchen operation; kitchen size regarding

number of chefs and cooks; number of employees supervised; salary range; and number of airlines catered.

A panel consisting of graduate faculty from the college of Human Environmental Science and the Department of Statistics at Oklahoma State University reviewed the research instrument for content validity, clarity, and format. Nettles and Gregoire (1993) report that response rates increase if the contents of the survey are interesting to those who surveyed. Thus, some changes in the demographic questionnaire from Liu's were made for airline catering chefs and cooks.

Translation in Korean

Initially the survey instrument was in English so translation into Korean was necessary. Two people who are qualified in both English and Korean conducted the translation of English into Korean. Yun-Kyoung Kim, a Ph.D. student majoring in Teaching English as a Second Language (TESL) and Chung-Shin Park, an Associate Professor in History at Oklahoma State University, both reviewed the survey. In this way, two interpreters checked the work.

For translating the salary range of United States' Dollars to Korean Won, the average exchange rate was used between United States' dollar currency and Korean Won currency. The average exchange rate was used from the "Currency Trading" section in Wall Street Newspaper from June 07, 1999 to July 04, 1999 (The Wall Street Journal, 1999).

Survey Procedures

A cover letter was developed to accompany the instrument explaining the research, providing instructions for completion, and ensuring confidentiality. The cover letter was printed on Oklahoma State University letterhead stationary (Appendix A).

For Korean Participation

In Korea, there are two airline catering kitchens, Korean Airline Catering and Asiana Airline Catering. Only three copies of the survey were mailed to Korea. Since the researcher in this study had worked for an airline catering company in Korea, a Korean colleague received the mail, copied the complete survey with the cover letter, and distributed all of them to both companies' employees throughout Korea. This colleague in Korea used little empty sealed boxes with a slit on the top surface of the box, for participants to return the surveys anonymously. At the end of survey period, the colleague collected the boxes detached the cover letters and mailed them to the researcher in the United States.

For United States Participation

Dobbs International Services, Inc. has sixty-seven airline catering kitchens in the United States. The researcher in this study had an internship at Dobbs International Services, Inc., San Francisco kitchen, which is one of target participation group of this study.

The researcher surveyed San Francisco kitchen chefs and cooks. First, initial permission was obtained from the General Manager of San Francisco kitchen. Second, one set of the survey was reviewed by the Executive Chef and permission was obtained from him. The researcher then approached each individual chef and cook in the San Francisco kitchen during their lunch-break and dinner-break. For the graveyard shift, the researcher came to the company by 5:30am (Graveyard shift: 10:00pm – 6:00am). Before the graveyard shift members were leaving, the researcher went to the kitchen and asked them to participate.

For the rest of the airline catering kitchens, questionnaires including cover letters were faxed to each kitchen. The personnel managers of each kitchen were in charge of making copies and distributing them to each kitchen's chefs and cooks. The researchers needed a separate instruction letter for handling surveys to the personnel managers including distribution of empty envelopes (Appendix F). Participants in the United States could mail or fax their responses directly to the researcher or give them back to a personnel manager in that kitchen. The personnel managers sent the surveys back by mail or fax to the researchers. Some personnel managers sent the finished surveys to the regional personnel managers. They followed the same procedures as the personnel managers of each kitchen. This process continued until all the returned surveys were received by the researchers.

The questionnaires were faxed to each Dobbs' kitchen in the United States in the last week of July, 1999, and mailed to Korea one week ahead of this fax so that participation started at almost the same time. Respondents were asked to reply on or before August 31, 1999. Survey collection was stopped on Oct 1, 1999. The average response rate of the

United States' population was 33.3% (60 responses out of 180 survey) and 77.1% (101 responses out of 131) for the Korean population.

Data Analysis

The returned questionnaires were coded and the data collected was transcribed and processed into the computer using the software Microsoft Office 97, Excel. Statistical Analysis System software (version 6.11, 1989-1996) was used in the data analysis. Percentages and frequencies were determined for the demographic information. A t-test was used for analyzing each subscale's norm. The nine dependent variables were pay, promotion, supervision, benefits, contingent rewards, operating procedures, coworkers, nature of work, and communication.

A Z-test was used to determine the relationship between the nine subscales and the total job satisfaction score. The Z transform of the correlation coefficient was used to test the null hypothesis that (Kempthorne & Folks, 1971).

$$Z = \frac{1}{2} \ln \left(\frac{1+r}{1-r} \right) = \frac{1}{2} \ln \left(\frac{1+.111}{1-.111} \right) = .11157$$

This value was used since each of the nine subscales of the total job satisfaction score will be perfectly correlated with itself leading to a theoretical null correlation coefficient of $\rho=1/9$. All tests were one tailed since the research questions indicate a positive relationship between each subscale and the total job satisfaction score.

The author of JSS provided “total norms for the Job Satisfaction Survey” which was based on 5,605 individuals, who worked as foodservice personnel, nurses, police officers, and technicians (Spector, 1995). The comparison between the norms of this study and Spector was conducted to identify the general airline catering industry’s job satisfaction level.

CHAPTER IV

RESULTS

This study assessed the level of job satisfaction of airline catering chefs and cooks. Data was obtained using the Job Satisfaction Survey (JSS) and demographic questions. The questionnaires were mailed and faxed to a total of 311 airline catering chefs and cooks in the United States and Korea. The response rate was 77.1 percent (N=101 out of 131) for Korean participants and 33.3 percent (N=60 out of 180) for United States participants. The total overall response rate was 51.8 percent (N=161).

Characteristics of the Survey Participants

Subjects represented the whole population of airline catering chefs and cooks in Korea and Dobbs International Services, Inc. in the United States. The following tables list the frequencies and percentages of the respondents' demographic characteristics: gender, age, nationality, job title, highest level of education, status of employment, number of years employed as a chef or a cook, number of years employed in the current company, their major work area, the type of facility, the operation size, hours of kitchen operation, staffing (such as number of employees supervising), annual salary range, and the numbers of airlines currently catering. Of the 161 respondents, 95 were male, 41 were female, and 25 did not indicate (Table III). The majority of respondents were males as shown in table three. Of the 161 respondents fifty percent

were between the age of 25-44. The majority of respondents (60%) were less than 45 years of age (N=96) and one was older than 65 (Table IV).

TABLE III
GENDER OF RESPONDENTS

Gender	Korea N=101	US N=60	Total N=161	Percentage
Males	55	40	95	59.0%
Females	30	11	41	25.5%
No Response	16	9	25	15.5%

TABLE IV
AGE OF RESPONDENTS

Age	Korea N=101	US N=60	Total N=161	Percentage
Under 25	13	2	15	9.3%
25 - 34	26	8	34	21.1%
35 - 44	26	21	47	29.2%
45 - 54	15	13	28	17.4%
55 - 64	1	7	8	5.0%
65 and older	0	1	1	0.6%
No Response	20	8	28	17.4%

The majority of respondents were Asian. Sixty-nine respondents were Korean. Eight percent were Chinese (N=11) and Vietnamese (N=2) (Table V). Some respondents answered their race group instead of nationality such as White (N=5) and Black (N=5). Only four percent of the respondents were American (N=6). Others included British, French, Swiss, Mexican, Armenian, and El Salvadorian.

TABLE V
NATIONALITY OF RESPONDENTS

Nationality	Korea N=101	US N=60	Total N=161	Percentage
Korean	69	0	69	42.9%
Chinese	0	11	11	6.8%
American	0	6	6	3.7%
White*	0	5	5	3.1%
Black*	0	5	5	1.2%
Vietnamese	0	2	2	1.2%
Others	0	4	4	3.7%
No Response	32	27	59	36.6%

* Some respondents marked race instead of nationality.

** Mexican (N=1), Armenian (N=1), El Salvadorian (N=1), British (N=1), French (N=1), and Swiss (N=1)

Sixty-one percent of respondents listed their current job title as cook. Thirty-one percent listed their job title as a sous chef and seven percent listed their job title as an executive chef.

Seven respondents (4%) indicated that an associate degree was their highest level of education obtained, and twenty-eight (17.4%) indicated that their highest level of education was culinary school (Table VI). Thirty-six respondents (22.4%) had obtained a 2 year college degree and ten respondents (6.2%) had obtained Master's degrees and up.

TABLE VI
HIGHEST LEVEL OF EDUCATION OBTAINED

Level of Education	Korea N=101	US N=60	Total N=161	Percentage
High School	41	29	70	43.5%
Culinary	10	18	28	17.4%
Associate Degree	1	6	7	4.3%
2 year College	25	11	36	22.4%
4 year College	9	4	13	8.1%
Master's Degree and up	3	7	10	6.2%
No Response	12	13	25	15.5%

Note: Since many respondents listed multiple answers, percentages in Table VI do not add up 100 percent.

The majority of respondents were currently full time employees (N=127) and nine respondents (6.6%) were part time employees (Table VII). Only one respondent had a retired status (0.6%).

TABLE VII
STATUS OF EMPLOYMENT

Status of Employment	Korea N=101	US N=60	Total N=161	Percentage
Full Time (40 or more hours/week)	76	51	127	78.9%
Part Time (39 or less hours/week)	3	6	9	5.6%
Not employed or retired; Or not employed as a chef or a cook	0	1	1	0.6%
No Response	22	2	24	14.9%

The number of years employed as chefs or cooks ranged from one month to more than 25 years with a mean of 5.5 years (Table VIII). Forty-eight respondents (29.8%) were employed as chefs or cooks for more than 10 years. Twelve respondents (7.5%) reported more than 25 years at their job.

TABLE VIII
NUMBER OF YEARS EMPLOYED AS A CHEF OR A COOK

Year	Korea N=101	US N=60	Total N=161	Percentage
Under 1	1	1	2	1.2%
1 – 5	22	17	39	24.2%
6 – 10	15	10	25	15.5%
11 – 15	8	4	12	7.5%
16 – 20	12	4	16	9.9%
21 – 25	3	5	8	5.0%
More than 25	4	8	12	7.5%
No Response	36	11	47	29.2%

The majority of respondents (N=81) were employed in the current company between one year and five years (Table IX). Five respondents (3.1%) listed more than 25 years with their current company.

TABLE IX
NUMBER OF YEARS EMPLOYED IN CURRENT COMPANY

Year	Korea N=101	US N=60	Total N=161	Percentage
Under 1	6	3	9	5.6%
1 – 5	58	23	81	50.3%
6 – 10	13	6	19	11.8%
11 – 15	4	2	6	3.7%
16 – 20	4	1	5	3.1%
21 – 25	3	2	5	3.1%
More than 25	0	0	0	0.0%
No Response	13	23	36	22.4%

Most respondents (N=108) reported that they worked in the area of food production. Twenty-seven respondents reported administration/supervisory areas of employment (Table X). Other areas of work that were mentioned included menu planning (N=16), food & beverage cost control (N=3), and purchasing procedures (N=2).

TABLE X
AREA OF GREATEST PERCENTAGE OF WORK

Work Area	Korea N=101	US N=60	Total N=161	Percentage
Food Production	63	45	108	78.8%
Administration/Supervisory	16	11	27	19.7%
Menu Planning	6	10	16	11.7%
Food & Beverage Cost Control	0	3	3	2.2%
Purchasing Procedure	1	1	2	1.5%
No Response	15	9	24	14.9%

Note: Since many respondents listed multiple answers, percentages in Table X do not add up 100 percent.

Sixty-seven respondents (48.9%) were working in a hot kitchen and thirty-three respondents (24.1%) were working in a cold kitchen (Table XI). Other types of employment facilities were preparation (N=23), bakery (N=16), and administrative offices in the kitchen (N=13).

TABLE XI
TYPE OF EMPLOYMENT FACILITY

Facility	Korea N=101	US N=60	Total N=161	Percentage
Hot Kitchen	23	44	67	48.9%
Cold Kitchen	23	10	33	24.1%
Bakery	16	0	16	11.7%
Preparation (Butchery & Vegetable Kitchen)	18	5	23	16.8%
Administrative Office in Kitchen				
	2	11	13	9.5%
No Response	19	5	24	14.9%

Note: Since many respondents listed multiple answers, percentages in Table XI do not add up 100 percent.

Although fifty-nine respondents (36.6%) were working in a kitchen that produced less than 10,000 meals per day, twelve respondents (7.5%) listed their kitchen operation size as 30,000 meals per day and up (Table XII).

TABLE XII
OPERATION SIZE (AVERAGE MEAL PER DAY OF THE OVERALL KITCHEN)

Meals	Korea N=101	US N=60	Total N=161	Percentage
Less than 10,000	48	11	59	36.6%
10,000 – 19,999	15	4	19	11.8%
20,000 – 29,999	16	24	40	24.8%
30,000 and up	2	10	12	7.5%
No Response	20	16	36	22.4%

Fourty-two respondents (26.1%) indicated that their kitchen operates 24 hours a day (Table XIII). Twenty-nine respondents (18.0%) said that their kitchen operates only 8 hours a day.

TABLE XIII
HOURS OF KITCHEN OPERATIONS (HOURS PER DAY)

Hours	Korea N=101	US N=60	Total N=161	Percentage
8	26	3	29	18.0%
Over 8 - 16	37	5	42	26.1%
Over 16 –24*	10	42	52	32.3%
No Response	28	10	38	23.6%

* 24 hours operating kitchens were 42 kitchens and 26.1%.

Seventy-seven respondents (47.8%) listed the number of chefs and cooks in the overall kitchen that worked as 30 and up (Table XIV). But, there were ten respondents (6.2%) who were working in a kitchen employing less than 10 chefs and cooks.

TABLE XIV
NUMBER OF CHEFS AND COOKS IN OVERALL KITCHEN

Numbers of Chefs and Cooks	Korea N=101	US N=60	Total N=161	Percentage
Less than 10	0	10	10	6.2%
10 – 29	22	9	31	19.3%
30 – 49	40	5	45	28.0%
50 – 99	1	2	3	1.9%
100 and up	0	29	29	18.0%
No Response	38	5	43	23.6%

Although 31 respondents (19.3%) indicated that they had less than 10 chefs and cooks currently working in the kitchen, three respondents (1.9%) answered that the number of chefs and cooks currently working in the kitchen was 50 and up (Table XV).

TABLE XV

NUMBER OF CHEFS AND COOKS IN CURRENTLY WORKING IN KITCHEN

Numbers of Chefs and Cooks	Korea N=101	US N=60	Total N=161	Percentage
Less than 10	19	12	31	19.3%
10 – 19	20	4	24	14.9%
20 – 29	10	7	17	11.1%
30 – 39	3	14	17	11.1%
40 – 49	0	3	3	1.9%
50 and up	0	3	3	1.9%
No Response	49	17	66	41.0%

Fifty-five respondents (34.2%) supervised at least one employee and six respondents (3.7%) reported that they supervised over 80 employees (Table XVI). However, twenty-three respondents (14.3%) reported that they supervised no one.

Salaries ranged from under \$19,999 per year to \$45,000 and up, but sixty-eight respondents (42.2%) reported their annual salaries as under \$19,999 per year (Table XVII). Eight respondents (5%) listed their annual salary ranges as \$45,000 and up.

TABLE XVI
NUMBER OF EMPLOYEES SUPERVISED

Numbers of Employees	Korea N=101	US N=60	Total N=161	Percentage
None	13	10	23	14.3%
1 – 10	15	6	21	13.0%
11 – 20	6	9	15	9.3%
21 – 30	2	3	5	3.1%
Over 30*	5	9	14	8.7%
No Response	60	13	73	45.3%

* Six respondents reported that they supervise over 80 employees (3.7%).

TABLE XVII
ANNUAL SALARY RANGE

Annual Salary Range	Korea N=101	US N=60	Total N=161	Percentage
Under \$19,999	63	5	68	42.2%
\$20,000 - \$24,999	10	17	27	16.8%
\$25,000 - \$29,999	8	6	14	8.7%
\$30,000 – \$34,999	2	8	10	6.2%
\$35,000 - \$39,999	0	4	4	2.5%
\$40,000 – \$44,999	0	5	5	3.1%
\$45,000 and up	1	7	8	5.0%
No Response	17	8	25	15.5%

Although most of the respondents (N=116) were working in kitchens that currently cater to over 10 different airlines, twenty-five respondents (15.5%) reported that their kitchens currently cater to five or less different airlines (Table XVIII).

TABLE XVIII
NUMBER OF AIRLINES CURRENTLY CATERING

Numbers of Airlines	Korea N=101	US N=60	Total N=161	Percentage
1 – 5	0	25	25	15.5%
6 – 10	0	7	7	4.3%
11 – 15	42	11	53	32.9%
Over 15*	52	11	63	39.1%
No Response	7	6	13	8.1%

* 63 respondents answered that their kitchens cater to 28 different airlines.

All participants were a member of either the American Culinary Federation (ACF) or the Korean Culinary Association (KCA).

Job Satisfaction of the Survey Participants

Job satisfaction of the respondents was measured using the Job Satisfaction Survey (JSS). This survey was designed by Spector in 1985 (Appendix A). JSS had been

normed and validated on human service personnel in many different countries. Respondents were asked to answer 36 statements related to nine subsets of job satisfaction. One half of the questions were negatively worded and the rest were positively worded. Each item were answered from 1 (disagree very much) to 6 (agree very much). Spector narrowed down feelings about the job into 9 subscales with four statement for each scale. These subsets were pay, promotion, supervision, benefits, contingent rewards (rewards), operating procedures (procedures), co-workers, nature of work, and communication. Each of the nine facets had four questions.

The JSS scores in this study were compared with mean scores of a normative national sample (N=5605) for the nine subscales and for total job satisfaction. This normative national sample was assessed by Spector in 1994. The total job satisfaction is the sum of all 36 items. Individual facet scores are computed by summing the appropriate items; pay- question number 1, 10, 19, 28, promotion- 2, 11, 20, 33, supervision- 3, 12, 21, 30, benefits- 4, 13, 22, 29, contingent rewards- 5, 14, 23, 32, operating procedures- 6, 15, 24, 31, coworkers- 7, 16, 25, 34, nature of work- 8, 17, 27, 35, communication- 9, 18, 26, 36. Because each items score can range from 1 to 6, the individual facet scores can range from 4 to 24. This is because each facet has four items, so the lowest score is the sum of four ones, and the highest score is the sum of four sixes. When evaluating each of the nine subscales means are looked at. If means are 16 or higher, an individual is in the satisfied range of being happy in his/her job. For example, a respondent who had score 17 for pay can be considered he or she is satisfied with his or her pay. If means are between 12 and 16, an individual is neutral related to being satisfied in their job. For example, a respondent who had score 13 for the facet of promotion, can be considered he or she is

satisfied with promotion. If the means are lower than 12, individual' are dissatisfied with their job. For example, a respondent who had score 9 for the facet of supervision, can be considered he or she is satisfied with his or her supervisors (Spector, 1986) (Figure 2).

For total scores of overall job satisfaction, scores above 144 are considered in the satisfied range. Scores between 108 and 144 are considered neutral. Scores below 108 are considered in the range of dissatisfaction (Table XIX). Table XIX and Figure 2 show the comparison of national means and the airline catering chefs and cooks' means in this study related to job satisfaction. A t-test was conducted for the comparison.

Comparison of the subscales and the national norm

Comparison of the nine subscales' (pay, promotion, supervision, benefits, rewards, procedures, co-workers, nature of work, and communication) means to Spector's national norms shows that the airline catering chefs and cooks in this study were satisfied with two areas: co-workers (mean=16.7) and nature of work (mean=16.7) (Figure 2). Supervision (mean=15.8) was very close to the satisfied range (mean 16 or higher). The remaining subscales are all in the neutral range: pay, promotion, supervision, benefits, rewards, procedures, and communication. None of subscales were in the range of dissatisfied (lower than 12). In addition none of the subscales were above national norms on the normative profile (Figure 2).

However, airline catering chefs' and cooks' were significantly more satisfied with pay ($p=0.0008$) and significantly less satisfied with supervision ($p=0.0001$), co-workers ($p=0.0001$), and nature of work ($p=0.0001$) when compared to the national means (see Table XIX).

Comparison of the total job satisfaction and the national norm

Overall on total job satisfaction, the total score of airline catering chefs and cooks was significantly lower than the total score of Spector's national norm ($p=0.0001$), but both scores (the national and the scores from this study) were in the range of neutral so there is no indication of overall satisfaction or dissatisfaction (see Table XIX).

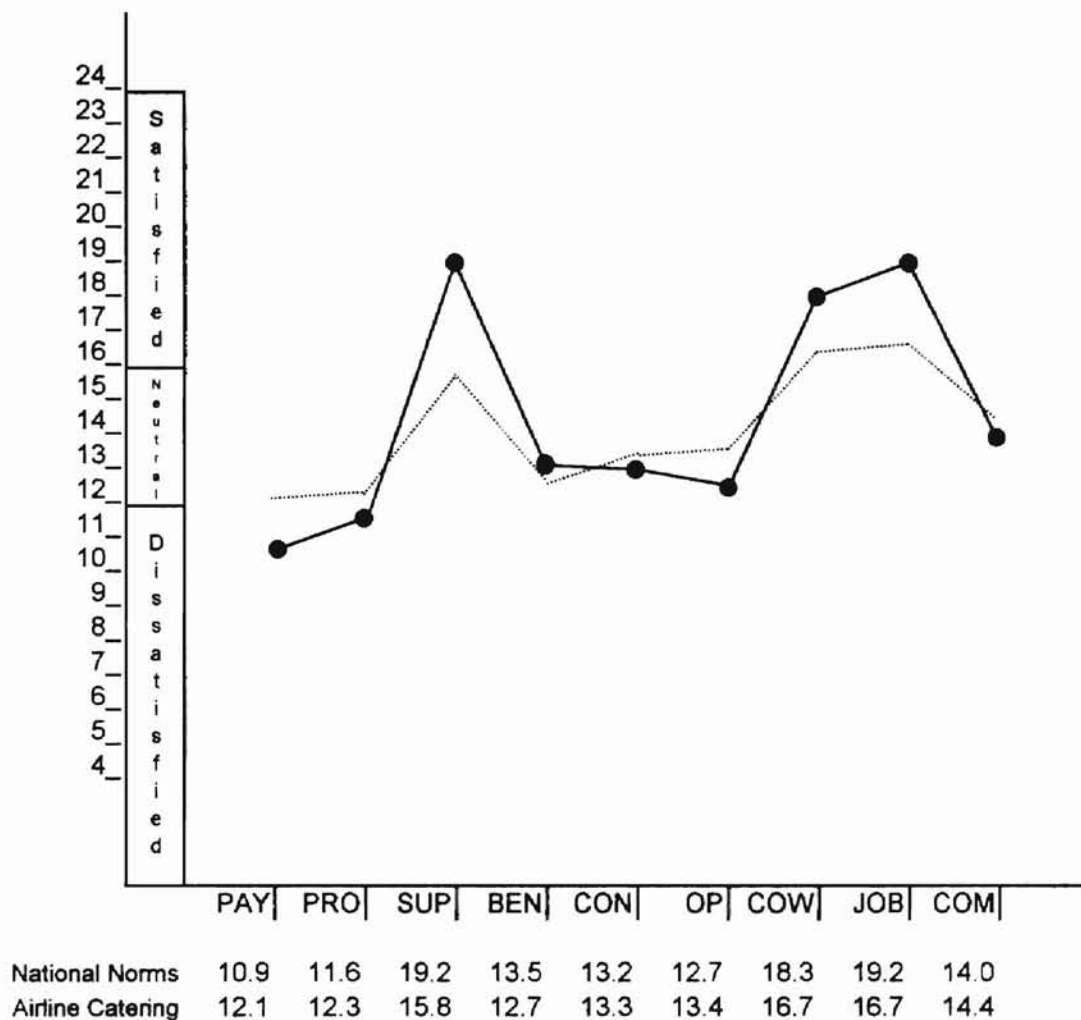


Figure 2. Normative Profile of Mean Responses for Organizations on the Nine Facets of the Job Satisfaction Survey (Spector, 1986).

Key: _____ 1994 National Norms
 Airline Catering chefs and cooks

TABLE XIX
COMPARISON OF NATIONAL AND AIRLINE CATERING CHEFS AND COOKS'
SUBSCALE MEANS FOR THE JOB SATISFACTION SURVEY (JSS)

Subscale	National Mean* N = 5605	National SD	C & C** Mean N = 161	Sample SD	t	p
Pay	10.9	2.0	12.1	4.3	3.42	0.0008
Promotion	11.6	1.9	12.3	4.0	2.15	0.0335
Supervision	19.2	1.6	15.8	4.1	-10.25	0.0001
Benefits	13.5	1.4	12.7	4.1	-2.38	0.0183
Rewards	13.2	1.9	13.3	4.2	0.41	0.6833
Procedures	12.7	1.9	13.4	4.0	2.23	0.0275
Co-workers	18.3	1.0	16.7	2.9	-7.01	0.0001
Nature/work	19.2	1.2	16.7	4.2	-7.29	0.0001
Communication	14.0	1.6	14.4	3.8	1.21	0.2268
Total	132.9	10.4	127.1	22.0	-69.69	0.0001

* Norms based on 5,605 individuals (Spector, 1995).

**C & C means airline catering chefs and cooks in this study.

Statistical Analysis

A Z-test was used to determine the relationship between nine subscales and the overall total job satisfaction score. Following Kempthorn' & Folks' (1971) the Z transform of the correlation coefficient was used to test the null hypothesis that:

$$Z = \frac{1}{2} \ln \left(\frac{1+r}{1-r} \right) = \frac{1}{2} \ln \left(\frac{1+.111}{1-.111} \right) = .11157.$$

This value was used since each of the nine subscales of the total job satisfaction score will be perfectly correlated with itself leading to a theoretical null correlation coefficient of $\rho=1/9$. All tests were one tailed since the hypothesis indicates a positive relationship between each subscale and the total job satisfaction score. The Z-test was also used to understand the relationship between age, years of employment as a chef or a cook, the operation size, and the number of employees supervised. The demographics were tested with each of nine subscales of the JSS: pay, promotion, supervision, benefits, contingent rewards, operating procedures, co-workers, nature of work, and communication. Significant differences were established at the $p \leq 0.05$ level or less.

The T-test was used to determine differences in job satisfaction between Korean airline catering chefs & cooks and United States airline catering chefs and cooks.

Test Research Question 1

Research Question 1. Higher pay increases overall job satisfaction among airline catering chefs and cooks in Korea and the United States.

The analysis of the relationship between pay and the total job satisfaction score was conducted using a Z-test (Table XX). Significant positive relationships were found for pay and the total job satisfaction score ($P < 10^{-9}$).

Test Research Question 2

Research Question 2. Korean and United States airline catering chefs' and cooks' perceptions of their jobs as having promotional opportunities increases overall job satisfaction.

The analysis of the relationship between promotion and the total job satisfaction score was conducted using a Z-test (Table XX). A significant positive relationship was found for promotion and the total job satisfaction score ($p=.0000000016$).

Test Research Question 3

Research Question 3. A positive relationship between Korean and United States chefs and cooks with their supervisors increases job satisfaction in airline catering chefs and cooks.

The analysis of the relationship between chefs & cooks and their supervision and total job satisfaction was conducted using a Z-test (Table XX). A significant positive relationship was found for supervision and the total job satisfaction score ($P < 10^{-9}$).

Test Research Question 4

Research Question 4. The perception of Korean and United States airline catering chefs and cooks as having good benefits increases job satisfaction in airline catering chefs and cooks.

The analysis of the relationship between the perception of benefits and the total job satisfaction was conducted using a Z-test (Table XX). Significant positive relationships were found for benefits and the total job satisfaction score ($P < 10^{-9}$).

Test Research Question 5

Research Question 5. Airline catering chefs' and cooks' perception of their jobs as having contingent rewards increases job satisfaction in airline catering chefs.

The analysis of the relationship between contingent rewards and total job satisfaction was conducted using a Z-test (Table XX). Significant positive relationships were found for contingent rewards and the total job satisfaction score ($P < 10^{-9}$).

Test Research Question 6

Research Question 6. The perception of Korean and the United States chefs and cooks working under complicated operating conditions decreases job satisfaction in airline catering chefs and cooks.

The analysis of the relationship between operating conditions and the total job satisfaction score was conducted using a Z-test (Table XX). A significant negative relationship was found for operating conditions and the total job satisfaction score ($P < 10^{-9}$).

Test Research Question 7

Research Question 7. Positive relationships between chefs and cooks and their coworkers increases job satisfaction in airline catering chefs and cooks.

The analysis of the relationship between chefs & cooks and their coworkers and total job satisfaction was conducted using a Z-test (Table XX). A significant positive relationship was found for chefs & cooks and their coworkers and the total job satisfaction score ($p=.0004041$).

Test Research Question 8

Research Question 8. A positive perception of the prestige of chefs' and cooks' jobs in Korean and United States airline catering increases job satisfaction in airline catering chefs and cooks.

The analysis of the relationship between the nature of work and the total job satisfaction score was conducted using a Z-test (Table XX). A significant positive relationship was found between the nature of work and the total job satisfaction score ($p=.0000046$).

Test Research Question 9

Research Question 9. The perception of Korean and United States chefs and cooks as working in an organization with clear communication increases job satisfaction for airline catering chefs and cooks.

The analysis of the relationship between communication and the total job satisfaction score was conducted using a Z-test (Table XX). A significant positive relationship was found for communication and the total job satisfaction score ($P < 10^{-9}$).

TABLE XX
COMPARISON OF SUBSCALE AND TOTAL JOB SATISFACTION SCORES OF
THE STUDY USING Z-TEST

Subscale	r ($\rho = .111$)	z	p
Pay	.746	9.337	$<10^{-9}$
Promotion	.573	5.927	.0000000016
Supervision	.627	6.850	$<10^{-9}$
Benefit	.642	7.117	$<10^{-9}$
Contingent rewards	.764	9.788	$<10^{-9}$
Operating procedures	.610	6.550	$<10^{-9}$
Coworkers	.395	3.351	.0004041
Nature of work	.475	4.437	.0000046
Communication	.677	7.793	$<10^{-9}$

N=123

Note: The calculation of total score requires all 36 answers. If anyone is missing, the total is missing.

Test Research Question 10

Research Question 10. There is no significant difference in job satisfaction between airline catering chefs and cooks in Korea and airline catering chefs and cooks in the United States.

The United States' airline catering chefs and cooks were more satisfied than Korean airline catering chefs and cooks on subscales of pay ($p=0.0001$), promotion ($p=0.0001$), benefits ($p=0.0001$), and nature of work ($p=0.0386$) (see Table XXI). Overall job satisfaction of US airline catering chefs and cooks is significantly higher than Korean chefs and cooks.

Using Spector's JSS subscale means (16-24 satisfied, 12-16 neutral, and 4-12 dissatisfied), United States airline catering chefs and cooks were satisfied (16-24) on supervision, coworkers and nature of work (see Figure 3). Pay, promotion, benefits, contingent rewards, operating procedures, and communication were neutral (12-16). None of the subscales were in the range of dissatisfied (4-12).

Using Spector's JSS subscale means, Korean airline catering chefs and cooks were satisfied (16-24) on co-workers and nature of work and dissatisfied (4-12) on pay, promotion, and benefits. Supervision, rewards, operating procedures, and communication were neutral (12-16) (see Figure 3).

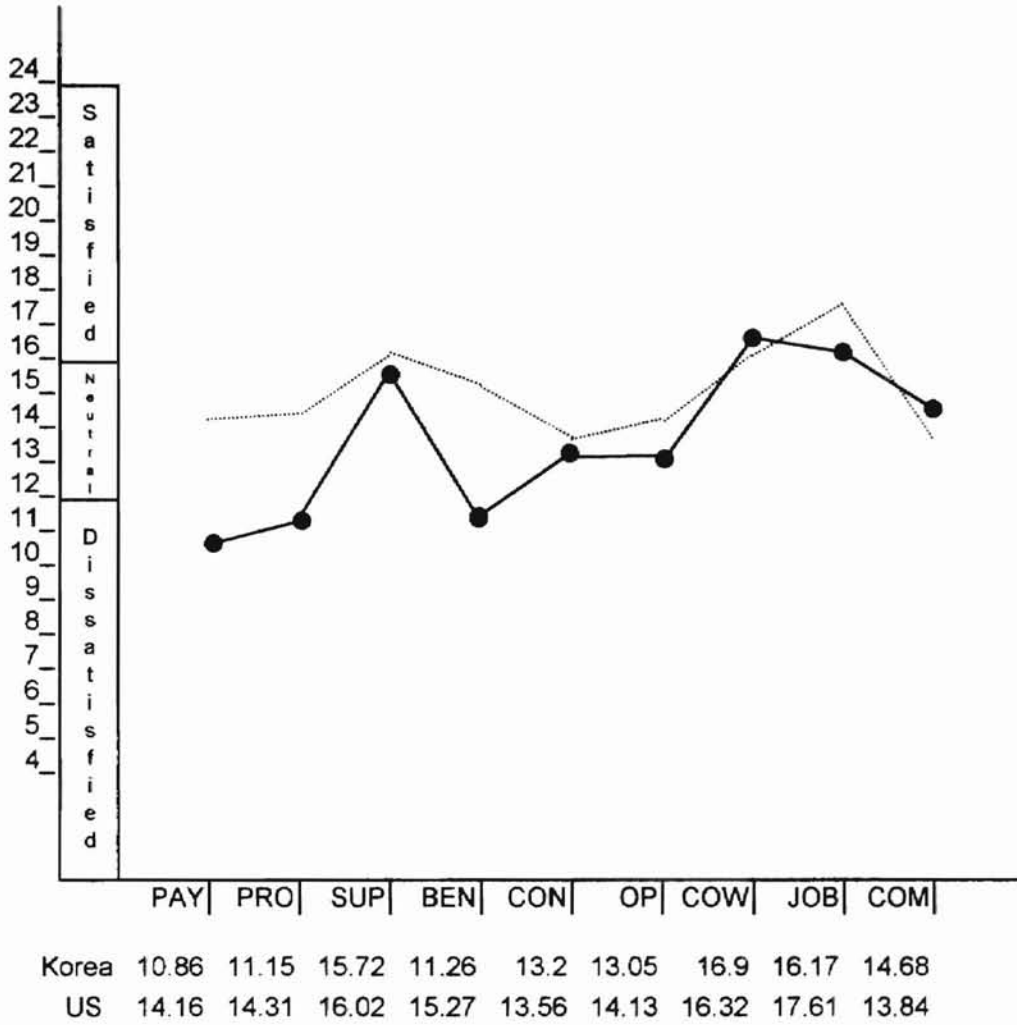


Figure 3. Comparison of nine subscales' means between Korea and the United States Airline Catering Chefs and Cooks

Key: — Korea
 The United States

TABLE XXI

COMPARISON OF NINE FACETS OF JOB SATISFACTION LEVEL BETWEEN KOREA AND
THE UNITED STATES AIRLINE CATERING CHEFS AND COOKS

FACET	Korea			The United States			t	df	p
	N	MEAN	SD	N	MEAN	SD			
Pay	99	10.86	3.45	58	14.16	4.83	4.56	91.5	0.0001
Promotion	98	11.15	3.56	55	14.31	3.87	4.98	104.2	0.0001
Supervision	96	15.72	3.72	59	16.02	4.66	0.42	102.8	0.6776
Benefits	98	11.26	3.55	56	15.27	3.72	6.54	110.0	0.0001
Rewards	88	13.20	3.21	55	13.56	5.39	0.45	78.2	0.6562
Procedures	97	13.05	3.75	52	14.13	4.38	1.51	91.4	0.1345
Coworkers	98	16.90	2.98	60	16.32	2.77	-1.24	132.0	0.2161
Nature/work	96	16.17	4.23	59	17.61	4.14	2.09	124.8	0.0386
Communication	96	14.68	3.11	55	13.84	4.66	-1.19	82.1	0.2357
Total	78	122.17	15.39	45	135.60	28.53	2.92	59.1	0.0049

Demographic Questions and Subscales of Job Satisfaction

Four demographic variables were tested using Spector's nine subscales of job satisfaction. These four demographic variables were also tested for overall job satisfaction.

There is a significant relationship between age and pay, promotion, benefits, and nature of work (Table XXII). This study found that the older chefs and cooks were, the more satisfied they were with pay ($p=0.0192$). The older chefs and cooks were, the more satisfied they were with promotion ($p=0.0044$). The older chefs and cooks were, the more satisfied they were with benefits ($p=0.0099$). The older chefs and cooks were, the more satisfied they were with nature of work ($p=0.0122$). The remaining subscales of job satisfaction were not significant relative to age: supervision, contingent rewards, operating procedures, coworkers, and communication. The total job satisfaction score, however, was highly related to age ($p=0.0014$).

There were a significant relationships between years of employment as a chef or a cook and pay, promotion, operating procedures, and communication (Table XXII). This study found that the longer chefs and cooks have been employed, the more satisfied they were with pay ($p=0.0321$). The longer chefs and cooks have been employed, the more satisfied they were with promotion ($p=0.0401$). The longer chefs and cooks have been employed, the more satisfied they were with operating procedures ($p=0.0362$). The longer chefs and cooks have been employed, the more satisfied they were with communication ($p=0.0494$). This study did not find a significant relationship between years of employment as a chef or a cook and the subscales of supervision, benefit, contingent rewards, coworkers, and nature of work.

Operation size did not have any significant relationship ($p=0.9716$) with any of the nine subscales except coworkers ($p=0.0383$) (Table XXII). This study found that the bigger operation size, the less satisfied they were with their coworkers.

There is a significant relationship between the number of employees supervised and pay and communication (Table XXII). This study found that the many employees chefs and cooks supervise, the more satisfied they were with pay ($p=0.0250$). The many employees chefs and cooks supervise, the more satisfied they were with communication ($p=0.0064$). The remaining subscales of job satisfaction did not have a strong relationship with number of employees supervised.

Demographic Questions and Total Job Satisfaction

Age ($P=0.0014$), years of employment as a chef or a cook ($p=0.0031$), and the number of employees supervised ($p=0.0143$) were highly related to total job satisfaction (Table XXII). But, the operation size did not have a significant relationship with total job satisfaction ($p=0.9716$).

TABLE XXII

COMPARISON OF SUBSCALE AND TOTAL JOB SATISFACTION SCORES OF THE STUDY BY DEMOGRAPHIC VARIABLES USING Z-TEST

Variable	Pay	Promotion	Supervision	Benefit	Contingent Rewards	Operating Procedures	Coworkers	Nature of Work	Communication	Total
Age										
r	0.205	0.252	0.043	0.228	0.087	0.061	0.044	0.222	0.048	0.315
p	0.0192	0.0044	0.6302	0.0099	0.3537	0.5017	0.6166	0.0122	0.5927	0.0014
N	130	126	127	127	117	125	130	127	125	100
Years of employed as a chef or a cook										
r	0.194	0.188	0.071	0.139	0.158	0.193	0.079	0.173	0.181	0.300
p	0.0321	0.0401	0.4450	0.1321	0.0971	0.0362	0.3886	0.0590	0.0494	0.0031
N	122	119	119	119	111	118	122	120	118	95
Operation Size										
r	0.046	0.123	0.070	0.047	-0.077	0.095	-0.184	0.146	-0.103	-0.004
p	0.6097	0.1736	0.4423	0.6066	0.4109	0.2963	0.0383	0.1039	0.2567	0.9716
N	127	123	124	125	115	124	127	126	122	100
Number of employees Supervising										
r	0.242	0.113	0.200	0.206	0.195	0.141	0.134	0.188	0.297	0.294
p	0.0250	0.3089	0.0670	0.0604	0.0831	0.1960	0.2232	0.0847	0.0064	0.0143
N	86	83	85	84	80	86	85	85	83	69

CHAPTER V

SUMMARY & DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

Summary & Discussion

The hospitality industry's growth is phenomenal. Along with this phenomenal growth has come high employee turnover. The industry's turnover rate has been increasing for many years (NRA, 1990-1997). Since managers in the hospitality industry have identified employee turnover as one of the most difficult issues, researchers have endeavored to measure job satisfaction to understand this turnover situation.

The airline catering industry which caters to 1.24 billion passengers per year and employs about 1.5 million people is a large segment of the hospitality industry (Hanlon, 1996). Looking at airline catering chefs' and cooks' level of job satisfaction may give insight into the overall turnover situation.

The purpose of this study was to assess the level of job satisfaction of airline catering chefs and cooks. The following two major objectives were established: to examine the relationship between nine subscales of job satisfaction and a total job satisfaction score and to evaluate the differences in job satisfaction between Korean and United States airline catering chefs and cooks. In addition, this study examined the relationship between age, years of employment as a chef or a cook, operation size, and the number of employees supervised with overall job satisfaction. To answer the first major objective, nine research questions were postulated. These nine research questions were: Research Question 1. Higher pay increases overall job satisfaction among airline catering chefs and cooks in

Korea and the United States. Research Question 2. Korean and United States airline catering chefs' and cooks' perceptions of their jobs as having promotional opportunities increases overall job satisfaction. Research Question 3. A positive relationship between Korean and United States chefs and cooks with their supervisors increases job satisfaction in airline catering chefs and cooks. Research Question 4. The perception of Korean and United States airline catering chefs and cooks as having good benefits increases job satisfaction in airline catering chefs and cooks. Research Question 5. Airline catering chefs' and cooks' perception of their jobs as having contingent rewards increases job satisfaction for airline catering chefs. Research Question 6. The perception of Korean and the United States chefs and cooks working under complicated operating conditions decreases job satisfaction in airline catering chefs and cooks. Research Question 7. Positive relationships between chefs and cooks and their coworkers increases job satisfaction for airline catering chefs and cooks. Research Question 8. A positive perception of the prestige of chefs' and cooks' jobs in Korean and United States airline catering increases job satisfaction in airline catering chefs and cooks. Research Question 9. The perception of Korean and United States chefs and cooks as working in an organization with clear communication increases job satisfaction for airline catering chefs and cooks.

To answer the second major objective, research question 10 was asked which was there is no significant difference in job satisfaction between airline catering chefs and cooks in Korea and airline catering chefs and cooks in the United States. The instrument for this study had two parts: a Job Satisfaction Survey (JSS) (Appendix B) and demographic questions (Appendix D). The Job Satisfaction Survey, JSS is a 36 item, nine

faceted scale that assesses employee attitudes about the job and nine aspects of the job. Each of these nine facets is assessed by four questions and a total score is computed from all questions. A Likert scale is used for responses, with six possible choices ranging from “strongly disagree” to “strongly agree”. The nine facets are pay, promotion, supervision, benefits, contingent rewards, operating procedures, coworkers, nature of work, and communication. The demographic information gathered in this study included: gender; age; nationality; current job title; highest level of education; employment status; years employed in chef and cook position; years employed in the company; area of work; types of employment facilities; operation size (average meals per day); hours of kitchen operation; number of chefs and cooks in kitchen; number of employees supervised; salary range; and number of airlines catered.

Initially the survey instrument was in English so translation into Korean was necessary. Two people who are qualified using both English and Korean conducted the translation of English into Korean.

After this translation, survey questionnaires were mailed and faxed to airline catering chefs and cooks in the United States with a cover letter (Appendix A and Appendix B). For Korean participation, only three copies of the surveys were mailed to Korea (Appendix A and Appendix C). Young Ho Park who was the researcher’s colleague received the three surveys, then copied and distributed them to chefs and cooks in Korea. U.S. and Korean respondents were given 30 days to respond. Korean respondents returned their surveys personally at work. Young Ho Park collected them and mailed the surveys to the researcher. U.S. respondents returned their surveys via mail and fax to their respective personnel managers. The personnel managers then mailed the

surveys to the researcher. Survey collection was stopped on Oct 1, 1999. Three hundred and eleven surveys were distributed. One hundred eighty surveys were distributed to U.S. employees and one hundred thirty one surveys were distributed to Korean employees.

Data was obtained from 161 surveys (51.8% response rate). One hundred and one respondents were from Korea and sixty were from the United States. Historically, education in Korea has been considered the most important value for the next generation. If Koreans are asked to participate in a survey or an interview which is related to an educational accomplishment, they are eager to oblige. This could be a factor in more Korean respondents replying. After receipt of the survey, the data was then analyzed using frequencies, percentages, t-test, and Z-test.

Demographic Information of Participants

Ninety-five respondents who answered the gender questions were males. Forty-one respondents were females and twenty-five respondents did not reply. The majority of respondents were less than 45 years of age (N=96). This age distribution is very similar to one reported by Miller (1995) in his study of dietetic technicians. His study had 77 percent of respondents who were less than 44 years of age. The physical demands of working as a chef or a cook in a high volume kitchen could tend to limit workers to 44 years of age or younger. In any case, clearly the youthfulness of the respondents should be noted. In addition, the majority of respondents were Asian. Since sixty-three percent of the total respondents were from Korea, this result could be expected. However, a considerable number of U.S. respondents were also Asian. Fifty-nine respondents (37%) had obtained a 2 year college degree or higher. Twenty-eight respondents indicated that their highest

level of education was culinary school. The educational level of respondents in this study is a reflection of requirements by the companies that chefs and cooks must be certified. The American Culinary Federation and the Korean Culinary Association both require certain amount of training hours and tests to give the certificates.

The majority of respondents in this study were currently full time employees (N=127) and forty-eight respondents (29.8%) had been employed as chefs or cooks for more than 10 years. The majority of respondents (N=81) were employed in their current company between one year and five years and most respondents (N=108) reported that they worked in the area of food production. This is logical, since being in kitchen food production is the most important part of a chef/cook's job. As a chef or a cook, an individual has the opportunity to work in many areas. These areas include food production, menu planning, cost control, purchasing, and kitchen administration. Usually, only top managerial chefs are in charge of menu planning. Other administrative staffs work in the areas of purchasing, cost control, and kitchen administration.

Sixty-seven respondents (48.9%) were working at a hot kitchen and thirty-three respondents (24.1%) were working at a cold kitchen. Large operations may consist of many specialized kitchens such as a hot kitchen (a kitchen which produces hot food, with any ingredients to be cooked on a stove, oven, grill, etc.), a cold kitchen (a kitchen which produces foods that do not need to be cooked on a stove, oven, grill, etc.), and a bakery kitchen (a kitchen which produces bread, chocolate products, etc.) Since this study excluded kitchens producing non-trayed meals such as pretzels, peanuts, and bagged meal kitchens, most kitchens in this study produced hot entrées, hot breakfasts, cold salads, appetizers, and full course meals. If a kitchen caters to international flights, most

passengers are served with delicately hand-made canapés and freshly cooked T-bone steak (not a frozen pop-out meal).

Although fifty-nine respondents (36.6%) were working in a kitchen that produced less than 10,000 meals per day, twelve respondents (7.5%) listed their kitchen operation size as 30,000 meals per day and up. Some operations have a very high volume of meals to cater in one airport area. They have one kitchen for domestic airlines, one dedicated to only one certain airline, and one for the rest of the international airlines. Forty-two respondents (26.1%) indicated that their kitchen operated 24 hours a day. Twenty-four hour operations may contribute to employees' dissatisfaction, especially with those working on the graveyard shift. Seventy-seven respondents (47.8%) listed the number of chefs and cooks in the overall kitchen as 30 and up. Kitchens with thirty chefs and cooks or more are large physical working environments. Those chefs and cooks may need to increase their efforts to communicate with their coworkers and maintain smooth relationships with their supervisors and employees. This can be seen in the fact that both US and Korean participants' satisfaction levels relative to their communication at work were in the neutral range (means between 12 to 16) instead of the satisfaction range on the JSS (means 16 and up) (see Table XXI, p. 65).

Fifty-five respondents (34.2%) supervised at least one employee and six respondents reported that they supervised over 80 employees. Not only cooking delicate food but also managing staffs well is a very important part of chefs and cooks job in the kitchen. In this study seven executive chefs participated. Sixty-eight respondents (42.2%) reported their annual salaries as under \$19,999 per year. Korea is struggling with the International Monetary Fund (IMF) impact. IMF promotes exchange stability and orderly

exchange arrangements among member countries. IMF started to devalue the Korean currency from 1997. The majority of participants were from Korea (N=101). It is obvious they would receive less pay than U.S. chefs and cooks.

Most of the respondents (N=116) were working in kitchens that currently cater to over 10 different airlines. Due to different operational requirements for each airline, job tasks for the airline caterer becomes more complex. This may impact the job satisfaction level of operating procedures.

All participants were a member of either the American Culinary Federation (ACF) or the Korean Culinary Association (KCA). Qualified chefs are in great demand for the whole food service industry. Chefs and cooks must be able to do more than properly prepare and present food. They must understand traditions and factors influencing change (Hause & Labensky, 1995). In order for chefs and cooks to be a member of these organizations, they must demonstrate a high level of expertise in their job and knowledge of food quality. This can be seen in the fact that both U.S. and Korean chefs' and cooks' job satisfaction level in the subscale of nature of work were in the satisfaction level on the JSS (U.S. mean=17.61 and Korean mean=16.17) (see Table XXI, p. 65).

Job Satisfaction of Participants

As previously reported, the JSS had been normed and validated on human service personnel in many different countries (Spector, personal communication, June 28, 1999). As mentioned, ten scores are possible from the JSS: nine subscales and a total job satisfaction score. Also, previously mentioned, the nine subscales are pay, promotion, supervision, benefits, contingent rewards, coworkers, operating procedures, nature of

work, and communication. Spector who is the author of the JSS reported the national norms in 1995. This study was compared to Spector's normative sample in order to see any difference between the airline catering chefs/cooks and other service personnel such as nurses, police officers, and dietetic technicians (N=5605, Spector). Comparison of these results follows:

National Norms: Airline catering chefs and cooks scored significantly higher than national norms on pay. The average salary of chefs was \$45,000 which can be considered as above average level of pay in the United States (CHRIE, 1997). Airline catering chefs and cooks scored significantly lower than national norms on supervision, co-workers, and nature of work. These lower scores could be attributed to the physical work environment of chefs' and cooks'. Constant noise and repeated use of heavy equipment by many people simultaneously tends to increase the difficulty of concentrating on workers' tasks.

The total job satisfaction score of airline catering chefs and cooks was significantly lower than the total job satisfaction score on Spector's national norm. Because of the increased diversity of the workforce in airline catering kitchens, communication in supervising as well as in work relations has become increasingly more difficult.

Both airline catering chefs & cooks and Spector's national sample respondents' scores were in the range of neutral on overall job satisfaction (between 108 and 144) (see Table XX). This means that both airline catering chefs & cooks and national samples' respondents were neither satisfied nor dissatisfied in their job. However, chefs and cooks were overall less satisfied when compared to other service occupations.

In addition to the initial research questions, some demographic variables were tested to find out if any relationship with job satisfaction scores existed (nine facets and the total job satisfaction score). The results follow:

Demographic Personal Variables: The personal variables of age, years employed as a chef or a cook, operation size, and number of employees supervised were examined against each of the nine subscales as well as the total job satisfaction score. Results are as follows:

Age—There was a significant relationship between age and the subscales of pay. This result is similar to Brush, Moch, and Poovan's study in 1987. Brush et al. conducted a meta-analysis of 19 studies and the result was that in general, job satisfaction increases with age. Second, there was a significant relationship between age and the subscale of promotion. Older chefs and cooks usually have more experience thus more professional than younger coworkers. It is common sense to give them higher positions at work and let them use their accumulated knowledge efficiently to manage other employees. Third, there was a significant relationship between age and the subscale of benefits. Older chefs and cooks have attained greater expertise in their jobs, therefore, their benefits would be greater than younger chefs and cooks. Also there was a significant relationship between age and the subscale of nature of work (Table XXII). Older chefs and cooks should be more comfortable in performing their jobs, because with time repetitive tasks become easier. The remaining subscales of job satisfaction were not significantly related to age (supervision, contingent rewards, operating procedures, coworkers, and communication). The total overall job satisfaction score, however, was highly related to age. As older chefs and cooks remain in their jobs, seniority increases fringe benefits, pay, and promotional

opportunities. Thus, those increased benefits, pay, and promotional opportunities may increase employees' job satisfaction level.

Years of Employment—Years of employment as a chef or a cook was also positively related to the job satisfaction subscale of pay. It appears that the increase in the level of pay over the years of employment meets the expectation of chefs and cooks. Years of employment as a chef or a cook were also positively related to the job satisfaction subscale of promotion. Promotion opportunities tend to meet the expectations of chefs and cooks as job tenure increases. Years of employment as a chef or a cook were also positively related to the job satisfaction subscales of operating procedures. As chefs and cooks continue in their jobs, their view of the company's operating procedures appears to coincide with their expectations. Years of employment as a chef or a cook were also positively related to the job satisfaction subscales of communication. The longer chefs and cooks remain working, to more communication tends to be at acceptable levels. This study found that the longer chefs and cooks were employed, the more satisfied they were with pay, promotion, operating procedures, and communication.

Total job satisfaction was highly related to years of experience as a chef or a cook. This result is quite understandable. If someone dislikes his or her job, it is more probable that they will quit their current job before accruing multi-years of experience at that job.

Operation Size—Operation size and the nine subscales of job satisfaction did not have a significant relationship except between the variables of operation size and coworkers. The bigger the operation sizes the less satisfied chefs and cooks were with their coworkers. Chefs and cooks who work at big kitchens that cater 30,000 meals per day have more coworkers than smaller operation size kitchens. There is more challenge

and more conflict possible. With more people, there is more need to understand each other and strive for better communication. Kitchens, especially, which have very diverse groups require more effort to overcome obstacles such as different languages, different cultures, and different perceptions about attitude.

Number of Employees Supervised—The number of employees supervised was highly related to pay, communication and total job satisfaction. As chefs and cooks supervise more employees, their level of company position is getting higher. Thus their pay and authority are consequently higher too. Increase in pay, authority, and responsibility when supervising more people tends to give chefs and cooks increased satisfaction in their jobs.

For testing research questions 1 through 9, Z-test was used. The relationships between the nine subscales of job satisfaction and the total job satisfaction follow:

Nine Subscales of Job Satisfaction: Nine subscales of job satisfaction were tested against overall job satisfaction. The results of analysis of the relationship between the nine subscales and the total job satisfaction score indicated that there were significant positive relationships between all nine subscales (pay, promotion, supervision, benefits, contingent rewards, coworkers, operating procedures, nature of work, and communication) and the total job satisfaction score (Table XXI). Chefs and cooks who are satisfied with their rate of pay tend to be satisfied with their jobs overall. This is a logical finding. Pay is a measure of success. Chefs and cooks who are satisfied with their promotional opportunities tend to be satisfied with their jobs overall. The literature shows that individuals want to progress in their jobs. With promotional opportunities available, people tend to be more satisfied. Chefs and cooks who are satisfied with their supervisors tend to be satisfied with their jobs

overall. Regressive supervision makes for an unhappy work environment. A good relationship with one's supervisor is important. Chefs and cooks who are satisfied with their company benefits tend to be satisfied with their jobs overall. Chefs and cooks who are satisfied with their contingent rewards tend to be satisfied with their jobs overall. Reward appreciation, bonuses, and recognition are important for one's self-esteem. Chefs and cooks who are satisfied with their coworkers tend to be satisfied with their jobs overall. If coworker relationships are not good, then the "sense of belonging" need is not satisfied. Chefs and cooks who are satisfied with the content of their nature of work tend to be satisfied with their jobs overall. Joy in the activities of one's work breeds happiness. Chefs and cooks who are satisfied with the operating procedures in the workplace tend to be satisfied with their jobs overall. Simple and clear procedures eliminate complications and obstacles in the work environment. Chefs and cooks who are satisfied with their communication in workplace tend to be satisfied with their jobs overall. Ease of communication is crucial for clear job understanding. Communication is important in all we do. These results were somewhat predictable because these nine subscales were part of the total satisfaction score. If each nine subscales are not satisfied, the total job satisfaction score becomes lower.

For testing research question 10, a t-test was used. The results of analysis between job satisfaction of U.S. and Korean chefs and cooks is as follows:

Korea vs United States: United States' airline catering chefs and cooks were more satisfied than Korean airline catering chefs and cooks on subscales of pay, promotion, benefits, and nature of work (see Table XXI). The level of significance was set at $p \leq 0.05$. With the impact of financial devaluation within developing countries starting October

1997, Korean companies have been downsized. In addition many Korean companies have cut employees' pay throughout the whole country. Because of companies downsizing, there is less chance to be promoted as a Korean worker. Korean chefs and cooks receive reduced pay and frequently no vacation. Even though Korean chefs and cooks were satisfied with their coworkers and nature of work, since Korean participants in this study were less satisfied than the United States participants on pay, promotion, and benefits, there is a need to consider Korean chefs and cooks employment packages. This might substantially impact turnover.

Conclusion

The airline catering industry is a fast growing hospitality industry segment. Turnover in the hospitality industry has been found as high as 240% and it has been increasing for many years. Many researchers tend to approach the turnover situation through job satisfaction. Identifying the level of job satisfaction of airline catering staff may give insight into its core worker's group in the airline catering segment. Many studies have found that the more dissatisfied employees are on their job, the higher their desire to quit their job (Mobley, Griffeth, Hand, & Meglino, 1979).

This study found that airline catering chefs and cooks are significantly less satisfied in their jobs than other service personnel. It is recommended that airline catering companies place more emphasis on their chefs' and cooks' retention program. Increased emphasis on a chefs' and cooks' retention program could include company paid professional organization dues and conference funding, company reimbursement for

advanced studies, and changes in the physical work layout to reduce job related stress caused by excessive noise or other factors affecting task concentration.

Even though overall catering chefs and cooks were less satisfied with their jobs than other service personnel, this study found that Korean airline catering chefs and cooks were less satisfied than U.S. airline catering chefs and cooks with their jobs. Korean airline catering companies need to determine how they might more closely align pay, promotion, and fringe benefit structures with their U.S. counterparts. The airline catering industry overall needs to embark on aggressive evaluation of the lower job satisfaction level of its employees.

There are 1200 scheduled airlines in the world and the airline industry caters to around 1.25 billion passengers a year which means U.S. \$250 billion in revenue. This airline industry employs about 1.5 million people (Hanlon, 1996). In addition, researchers predict the airline catering industry has tremendous potential growth. The job of keeping employees in this industry is very important and is critical to the stability of a company. Results of this study show that the airline catering industry needs to closely evaluate current practices regarding pay, promotion, communication, operating procedures and employee benefits. A course of action in each area must be identified and a plan of implementation put into effect. Pay rates, timing of merit increases and length in service consideration should be adjusted to compare favorably with similar jobs in other industries. It would be important to compare promotion systems of other companies and adjust accordingly. In order to enhance communications among employees, the airline catering industry could needs implement diversity training particularly in the area of language. Reducing the difficulty of communication among diverse groups could greatly

increase employee job satisfaction. The airline catering industry needs to evaluate its employee benefits, particularly in the area of insurance coverage, company discounts offered, and paid days for company sponsored functions.

Recommendations

The following recommendations are offered for future studies:

1. Other groups of people in airline catering industry (such as cook helpers, operation department, flight checkers, drivers to planes, and administrative office staffs) could be surveyed with a similar questionnaire to evaluate the overall airline industry.
2. In this study, only two countries and three airline catering firms were surveyed. The sample size could be expanded to other airline catering groups and other countries.

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APPENDIXES

APPENDIX A
COVER LETTER

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Dear Participants! (Airline catering Chefs and Cooks)

How are you? We are Seung MI Lee and Dr. Martin.

This survey is for my master's thesis and designed to understand airline catering chefs & cooks' JOB SATISFACTION level.

Subjects of this study will be chefs and cooks in the airline catering industry in Korea and America. Your company's chefs and cooks' participation in this endeavor will help us answer some key questions, which have not been answered in past research.

PARTICIPATION is VOLUNTARY. Chefs and Cooks may choose not to participate at any time. The information from this survey will be held in strict CONFIDENCE and will be reported in only aggregate form. At no time will you or the facilities you serve be identified in the research results.

Thank you very much for your help!

When you finish this survey, please fold twice, put in an envelope without your name and give to your Personnel Manager.

Sincerely,

Seung Mi Lee
 Graduate Student in OSU
 Intern at SFO, DEN Dobbs Kitchen

Lynda L. Martin
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안녕하십니까?

저는 오클라호마 주립대에서 기내식 경영을 공부하고 있는 이승미라고 합니다.
 증가하는 항공여행의 추세로 볼 때 기내식 케이터링 사업은 차세대 눈부시게 발전할 수 있는 가능성이
 높은 사업분야로 인정받고 있습니다. 케이터링은 음식을 제공하는 사업이니만큼 특히 chef나 cook들의
 역할이 중요한 요소로 주목받고 있습니다. Martin 박사와 제가 함께 알아보고자 하는 것도 기내식 요리사
 분들의 직업안락도입니다. 여러분의 헬조선 미래의 기내식 요리사들의 고용, 교육, 보상제도등을 이해,
 계획하는데 많은 도움이 될 것입니다.

설문의 참여는 전적으로 본인의 의사에 달렸으며 언제라도 설문에 답하기를 거부하실 수 있습니다.
 모든 질문의 결과는 무기명으로(회사, 본인 모두) 다루어 질 것이며 어떠한 방법으로든 정보가 안전하게
 보호받을 것을 약속드립니다. 질문지는 분석이후 즉시 분쇄되어 그 비밀의 보장을 확고히 할 것입니다.

바쁘신 줄로 알고 있습니다만, 잠시 시간을 내시어 저의 설문에 답해주시면 정말 감사하겠습니다.
 자세한 설명이 필요하시면 오른쪽 위로 연락을 주시거나 쪽스를 주십시오(한국어). (405-744-6299)
 원하시면 결과를 11월 경에 보내드리겠으니 질문지 마지막에 의사를 알려 주십시오.

감사합니다.

1999년 6월 5일 이승미, Lynda L. Martin 윌렘.
 (Assistant Professor in OSU)

설문의 응답이 끝나면 두 번 접어서 함께 드린 봉투에(무기명) 넣어 박영호 씨나 처음 설문을 나누어
 주신 분께 제출해 주십시오. 즐거운 하루 되세요.



APPENDIX B
THE JOB SATISFACTION SURVEY (ENGLISH)

PLEASE CIRCLE THE ONE NUMBER FOR EACH QUESTION THAT COMES CLOSEST TO REFLECTING YOUR OPINION ABOUT IT.		D	D	D	A	A	
		D	D	D	A	A	
		I	I	I	A	A	
		S	S	S	G	G	
		A	A	A	R	R	
		G	G	G	E	E	
		R	R	R	M	M	
		E	E	E	O	O	
		V	V	V	D	D	
		E	E	E	E	E	
		M	M	M	M	M	
		U	U	U	U	U	
		C	C	C	C	C	
		H	H	H	H	H	
1	I feel I am being paid a fair amount for the work I do.	1	2	3	4	5	6
2	There is really too little chance for promotion on my job.	1	2	3	4	5	6
3	My supervisor is quite competent in doing his/her job.	1	2	3	4	5	6
4	I am not satisfied with the benefits I receive.	1	2	3	4	5	6
5	When I do a good job, I receive the recognition for it that I should receive.	1	2	3	4	5	6
6	Many of our rules and procedures make doing a good job difficult.	1	2	3	4	5	6
7	I like the people I work with.	1	2	3	4	5	6
8	I sometimes feel my job is meaningless.	1	2	3	4	5	6
9	Communications seem good within this organization.	1	2	3	4	5	6
10	Raises are too few and far between.	1	2	3	4	5	6
11	Those who do well on the job stand a fair chance of being promoted.	1	2	3	4	5	6
12	My supervisor is unfair to me.	1	2	3	4	5	6
13	The benefits we receive are as good as most other organizations offer.	1	2	3	4	5	6
14	I do not feel that the work I do is appreciated.	1	2	3	4	5	6
15	My efforts to do a good job are seldom blocked by red tape.	1	2	3	4	5	6
16	I find I have to work harder at my job because of the incompetence of people I work with.	1	2	3	4	5	6
17	I like doing the things I do at work.	1	2	3	4	5	6
18	The goals of this organization are not clear to me.	1	2	3	4	5	6
19	I feel unappreciated by the organization when I think about what they pay me.	1	2	3	4	5	6
20	People get ahead as fast here as they do in other places.	1	2	3	4	5	6
21	My supervisor shows too little interest in the feelings of subordinates.	1	2	3	4	5	6
22	The benefit package we have is equitable.	1	2	3	4	5	6
23	There are few rewards for those who work here.	1	2	3	4	5	6
24	I have too much to do at work.	1	2	3	4	5	6
25	I enjoy my coworkers.	1	2	3	4	5	6
26	I often feel that I do not know what is going on with the organization.	1	2	3	4	5	6
27	I feel a sense of pride in doing my job.	1	2	3	4	5	6
28	I feel satisfied with my chances for salary increases.	1	2	3	4	5	6
29	There are benefits we do not have which we should have.	1	2	3	4	5	6
30	I like my supervisor.	1	2	3	4	5	6
31	I have too much paper work.	1	2	3	4	5	6
32	I don't feel my efforts are rewarded the way they should be.	1	2	3	4	5	6
33	I am satisfied with my chances for promotion.	1	2	3	4	5	6
34	There is too much bickering and fighting at work.	1	2	3	4	5	6
35	My job is enjoyable.	1	2	3	4	5	6
36	Work assignments are not fully explained.	1	2	3	4	5	6

Thank you for taking the time to respond to this survey.

Your answers will help others understand roles, functions and needs of chefs & cooks. Your answers will remain confidential.

APPENDIX C

THE JOB SATISFACTION SURVEY (KOREAN)

기내식 요리사 설문 조사

제 1 장. 직업 만족도 설문 조사

각 질문 마다 본인의 의견을 가장 잘 (가깝게) 반영하는 번호에 동그라미로 표시하세요.

1 = 매우 그렇지 않다.

2 = 보통 그렇지 않다.

3 = 약간 그렇지 않다.

4 = 약간 그렇다.

5 = 보통 그렇다.

6 = 매우 그렇다.

1. 나는 내가 하고 있는 일에 적당한 보수를 받고 있다고 느낀다.	1	2	3	4	5	6
2. 내 직업에는 승진의 기회가 거의 없다.	1	2	3	4	5	6
3. 나의 상관은 그의 일을 하는데 꽤 능력이 있다.	1	2	3	4	5	6
4. 나는 내가 받는 복지 혜택(월급의 받는 모든 혜택)에 만족하지 않는다.	1	2	3	4	5	6
5. 내가 일을 잘 할 때는 그것에 상당한 인정을 받는다.	1	2	3	4	5	6
6. 짧은 규칙과 절차 때문에 일을 잘 하기가 힘들다.	1	2	3	4	5	6
7. 나는 내 동료들을 좋아한다.	1	2	3	4	5	6
8. 나는 가끔 내 직업이 의미가 없다고 느낀다.	1	2	3	4	5	6
9. 직장 내에서 의사 소통은 원활한 것 같다.	1	2	3	4	5	6
10. 부급인상의 기회가 너무 적다.	1	2	3	4	5	6
11. 일을 잘한 사람에게는 긍정적인 승진의 기회가 주어진다.	1	2	3	4	5	6
12. 나의 상관은 나에게 긍정적 않다.	1	2	3	4	5	6
13. 우리가 받는 복지 혜택은 다른 회사가 지급하는 것 만큼 좋다.	1	2	3	4	5	6
14. 내가 하는 일이 제대로 평가 되고 있지 않다고 느낀다.	1	2	3	4	5	6
15. 일을 잘하려는 나의 노력이 회사의 무관심 때문에 방해 받은 일은 거의 없다.	1	2	3	4	5	6
16. 동료들의 낮은 경쟁력이나 무능력 때문에 내가 더 열심히 일해야 한다고 느낀다.	1	2	3	4	5	6
17. 나는 직장에서 내가 하고 있는 일을 좋아한다.	1	2	3	4	5	6
18. 이 회사의 목적이 내게는 무의미하지 않다.	1	2	3	4	5	6
19. 내 월급을 생각해 보면 회사가 나를 제대로 인정하지 않는다고 느낀다.	1	2	3	4	5	6
20. 이 회사에서 사람들은 다른 회사에서 처럼 빨리 승진한다.	1	2	3	4	5	6
21. 나의 상관은 부하직위의 감정에 거의 관심이 없다.	1	2	3	4	5	6
22. 우리가 받는 복지 혜택은 적당하다.	1	2	3	4	5	6
23. 이 회사에서는 직원에게 주는 보상이 거의 없다.	1	2	3	4	5	6
24. 직장에서 할 일이 너무 많다.	1	2	3	4	5	6
25. 동료들과 같이 일하는 것이 즐겁다.	1	2	3	4	5	6
26. 나는 자주 직장에서 무슨일이 일어나고 있는지 모른다고 느낀다.	1	2	3	4	5	6
27. 나의 일에 자부심을 느낀다.	1	2	3	4	5	6
28. 나는 나의 부급인상 기회에 만족한다.	1	2	3	4	5	6
29. 우리가 풀 받아야 할 복지 혜택을 아직 받지 못하고 있다.	1	2	3	4	5	6
30. 나는 나의 상관을 좋아한다.	1	2	3	4	5	6
31. 서류 일이 너무 많다.	1	2	3	4	5	6
32. 나의 노력이 적절하게 보상받고 있다고 생각하지 않는다.	1	2	3	4	5	6
33. 나의 승진 기회에 만족한다.	1	2	3	4	5	6
34. 직장에 언쟁과 싸움이 너무 많다.	1	2	3	4	5	6
35. 내 직업을 좋아한다.	1	2	3	4	5	6
36. 내가 해야 할 일에 대한 실적이 불충분하다.	1	2	3	4	5	6

APPENDIX D
DEMOGRAPHIC QUESTIONS (ENGLISH)

DEMOGRAPHIC INFORMATION

Please fill out every question by checking the appropriate answer.

1. Gender: (1) Male (2) Female
2. Age Group: (1) Under 25 (2) 25-34 (3) 35-44
(4) 45-54 (5) 55-64 (6) 65 and up
3. Nationality: _____
4. Current job title: _____
5. Highest level of education obtained.
(1) High School (2) Culinary Instl (3) Associate Degree
(4) 2 year college (5) 4 year colleg (6) Master's degree and up
(7) Other: specify _____
6. Status of employment: (1) Full time (40 or more hours/week)
(2) Part time (39 or less hours/week)
(3) Not employed or retired; or not employed as a chef or a cook
7. Number of years you have been (or were) employed as a chef or a cook: _____
8. Number of years you have been (or were) employed in current company: _____
9. In what area is the greatest percentage of your work?
(1) Administration/Supervisory
(2) Menu Planning
(3) Food Production
(4) Food & Beverage Cost Control
(5) Purchasing Procedure
(6) Others; specify _____
10. In what type of facility do you currently work?
(1) Hot kitchen (2) Cold Kitchen (3) Bakery
(4) Preparation (Butchery & Vegetable Kitchen)
(5) Administrative office in kitchen
(6) Others; specify _____
11. Operation size. (average meal per day of the overall kitchen)
(1) less than 10,000 (2) 10,000 - 19,999
(3) 20,000 - 29,999 (4) 30,000 and up
12. Hours of kitchen operations: _____ hours per day.
13. Staffing: Number of chefs or cooks in your overall kitchen? (including your-self) _____
Number of chefs or cooks in your currently working kitchen? (including your-self) _____
How many employees do you supervise? _____
14. What is your approximate annual salary range?
(1) under \$19,999 (2) \$20,000 - \$24,999 (3) \$25,000 - \$29,999
(4) \$30,000 - \$34,999 (5) \$35,000 - \$39,999 (6) \$40,000 - \$44,999
(7) Over \$44,999
15. How many airlines does your kitchen cater? (for example, Delta airlines, United Airlines....) _____

Thank you for YOUR PARTICIPATION!

Please FOLD your answer twice put an envelope without your name and give to your personal manager.

APPENDIX E
DEMOGRAPHIC QUESTIONS (KOREAN)

제 2 장. 개인 정보 (이 질문들은 무기명으로, 통계자료로서만 다루어 질 것입니다.)

각 질문에 적당한 난에 표시하여 답하십시오.

1. 성별: (1) ___ 남자 (2) ___ 여자
2. 나이: (1) ___ 25세 이하 (2) ___ 25-34 (3) ___ 35-44
(4) ___ 45-54 (5) ___ 55-64 (6) ___ 65세 이상
3. 국적: _____
4. 현 지위: _____
5. 교육정도: (1) ___ 고졸 이하 (2) ___ 요미(조리) 학원졸 (3) ___ 직업학교졸
(4) ___ 2년제 전문대졸 (5) ___ 4년제 대학졸 (6) ___ 대학원 이상
(7) ___ 기타 (구체적으로) _____
6. 고용 상태: (1) ___ 정식 직원 (주당 40 시간 혹은 그 이상)
(2) ___ 임시직원 (주당 30시간 혹은 그 이하)
(3) ___ 고용되지 않았거나 퇴직한 상태, 혹은 요리사로 고용되지 않은 상태.
7. 얼마나 오랫동안 요리사로 일하셨습니까? _____
8. 현재 회사에서 얼마나 오랫동안 일하셨습니까? _____
9. 어떤분야가 당신의 일의 가장 많은 부분을 차지 합니까? (한가지만 표시 하세요)
(1) ___ 관리/감독직 (2) ___ 메뉴 계획 (3) ___ 일 생산(음식 만들기) ~~_____~~ 식품 비용 조절(가격관리)
(4) ___ 구매절차 (5) ___ 그 외: 구체적으로 쓰세요 _____
10. 어떤 주방 분야에서 일하고 계십니까?
(1) ___ 핫 키친 (2) ___ 콜드 키친 (3) ___ 베이커리 (4) ___ 분무주방(경육과 야채 주방)
(5) ___ 주방 관리 사무실 (6) ___ 그 외: 구체적으로 쓰세요 _____
11. 현재 주방의 하루 평균 식사 생산량:
(1) ___ 10,000 이하 (2) ___ 10,000 - 19,999
(3) ___ 20,000 - 29,999 (4) ___ 30,000 이상
12. 주방의 작업시간: (예: 24시간 풀타임 혹은 12 시간 운영 등등) _____
13. 현재 생산량의 요리사는 몇 분이십니까? (당신을 포함하여) _____
당신이 현재 일하고 있는 주방이나 사무실의 요리사는 몇 분이십니까? (당신을 포함하여) _____
당신이 맡고 있는 부하직원은 몇 명이십니까? _____
14. 당신의 연간 수입은?(단위 = 만원)
(1) ___ 2329 미화 (2) ___ 2329 - 2913.9 (3) ___ 2914 - 3494.9
(4) ___ 3495 - 4075.9 (5) ___ 4076 - 4658.9 (6) ___ 4659 - 5240.9
(7) ___ 5241 이상.

*수고 하셨습니다.

설문에 대한 소감이나 의견을 부탁드립니다.

15) 얼마나 많은 항공사에 음식을 제공하고 있습니까? ()

이 설문 조사에 시간을 내어 답해 주신데 대하여 감사드립니다.

당신의 답변들은 다른사람들이 요리사의 역할과 필요를 이해하는데 도움을 줄 것입니다. 설문지는 익명으로 다루어 질 것입니다.

이 설문지를 두 번 접어서 봉투에 넣은 뒤 봉투 외투나 지갑 실용지를 나누어 주신 분께 제출해 주십시오.

APPENDIX F

INSTRUCTION LETTER FOR US SURVEY HELPERS

INSTRUCTIONS FOR THE SURVEY

“Level of Job Satisfaction of Airline Catering Chefs”

Dear General Manager/ Local Personnel Department

Thank you for handling this very important survey.

This study is for the master's thesis of Seung Mi Lee & Dr.Martin at Oklahoma State University majoring in Hospitality Administration.

The purpose of this study is to understand the airline catering chefs & cooks' job satisfaction level.

This study is planned to obtain data during the busy summer time of 1999 in the airline catering industry. This study must be completed by August 8,1999. Possible participants are all chefs and cooks (not kitchen helpers).

Please distribute COVER LETTER + QUESTIONNAIRES (total 2 pages) to all chefs & cooks in your kitchen. The completed surveys should be returned to your Regional Personnel Manager no later than August 12,1999.

Regional Personnel Managers should please send completed surveys in unopened envelopes to:

FAX: 405-744-6299

Email: leesm@okstate.edu

ADD: Seung Mi Lee

Phone: 405-744-4269 (after August 9th)

210 HES, HRAD

650-274-3368

Oklahoma State University

Stillwater, OK 74074

We are expecting that the result of this study will be finalized by December 1999. I will give Dobbs the copy of the result in December 1999.

Again, I really appreciate your help.

Seung Mi Lee

Graduate Student, OSU

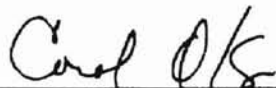
Intern, SFO,DEN Dobbs Kitchen

APPENDIX G
IRB APPROVAL LETTER

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD

Date: June 25, 1999 IRB #: HE-99-101
Proposal Title: "WHAT IS THE LEVEL OF JOB SATISFACTION AMONG AIRLINE
CATERING CHEFS?"
Principal Investigator(s): Lynda Martin
Seong Mi Lee
Reviewed and
Processed as: Exempt
Approval Status Recommended by Reviewer(s): Approved

Signature:



Carol Olson, Director of University Research Compliance

June 25, 1999

Date

Approvals are valid for one calendar year, after which time a request for continuation must be submitted. Any modification to the research project approved by the IRB must be submitted for approval. Approved projects are subject to monitoring by the IRB. Expedited and exempt projects may be reviewed by the full Institutional Review Board.

VITA

Seung Mi Lee

Candidate for the Degree of

Master of Science

Thesis: THE LEVEL OF JOB SATISFACTION OF AIRLINE CATERING CHEFS AND COOKS

Major Field: Hospitality Administration

Biographical:

Personal Data: Born in Seoul, Korea, On April 4, 1971, the daughter of Sang Lee and Yun Jin Kim.

Education: Graduated from Seo-Moon Womens High School, Seoul, Korea in Feb, 1990; received Bachelor of Science degree in Food and Nutrition Science from E-Wha Womens University, Seoul, Korea in Feb, 1995, respectively. Completed the requirements for the Master of Science degree with a major in Hospitality Administration at Oklahoma State University in December, 1999.

Experience: Employed as a dietician intern by Baek Jae Elementary School, Baek Jae, Korea in summer, 1994; employed by Asiana Airlines Catering Division as an assistant kitchen manager and menu developing member, 1994 to 1996; employed by Oklahoma State University, the school of Hotel and Restaurant Management as a graduate research assistant, spring and fall semester in 1999; employed by Dobbs International Services, Inc. as an intern in summer, 1999.

Professional Memberships: A member of Korean Nutritionist Association.