EVALUATING CONSUMER SATISFACTION WITH THE

MORALE WELFARE AND RECREATION SERVICE PROVISION AT THE

ANNISTON ARMY DEPOT

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Meghan A. Hunter, daughter of James and Mary Hunter, was born August 20, 1984 in Nashville, Tennessee. A graduate of Brentwood High School in Brentwood, Tennessee, Meghan attended Auburn University where she graduated with a Bachelor of Arts in Psychology in 2006. After graduation, she re-enrolled at Auburn University to pursue a Master of Science Degree in the subject area of Hotel and Restaurant Management.

THESIS ABSTRACT

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This research reports on efforts to gain a better understanding of service quality, satisfaction and how these link to future behavioral intentions. Against this background, the overriding goal of the study is to develop and operationalize a measure of consumer satisfaction with Morale, Welfare and Recreation (MWR) service provision at the Anniston Army Depot as well as identify those elements of real importance to personnel when it comes to defining the service quality construct on the Depot. Furthermore, this study attempts to test the validity and reliability of the Importance- Performance

Analysis technique as a service quality evaluation technique at the Depot and other military institutions where quality of service is deemed as an essential operational objective. In an attempt to achieve this underlying objective, a number of research hypotheses were developed and will be presented for analytical testing. The theoretical backing for these hypotheses will be presented as well as the statistical evidence that will show support of or reject each. The results reveal the core service quality dimensions of importance to Depot personnel in their assessment of Depot MWR services, as well as actual performance data related to these dimensions. A framework is presented by which the Directorate of Community and Family Activities can identify areas of customer service which warrant further investment and those where they may be currently over-delivering. Additionally, the information should prove useful in helping the Directorate of Community and Family Activity with their quality improvement efforts.

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Chapter I

INTRODUCTION

Aims and Objectives

This research reports on efforts to gain a better understanding of service quality, satisfaction and how these link to future behavioral intentions. Against this background, the overriding goal of the study was to develop and operationalize a measure of consumer satisfaction with Morale, Welfare and Recreation (MWR) service provision at the Anniston Army Depot as well as identify those elements of real importance to personnel when it comes to defining the service quality construct on the Depot. Furthermore, this study attempts to test the validity and reliability of the Importance-Performance Analysis technique as a service quality evaluation technique at the Depot and other military institutions where quality of service is deemed as an essential operational objective.

The research reviews the literature pertaining to each of the key research constructs and addresses the relationship between service quality, satisfaction and future behavioral intentions. In an attempt to achieve this underlying objective, a number of research hypotheses were developed and will be presented for analytical testing. The theoretical backing for these hypotheses will be presented as well as the statistical evidence that will show support of or reject each. Finally, the project is intended to serve

as a basis for future research, possibly enabling an even clearer understanding of the aforementioned constructs.

The results reveal the core service quality dimensions of importance to Depot personnel in their assessment of Depot MWR services, as well as actual performance data related to these dimensions. A framework is presented by which the Directorate of Community and Family Activities can identify areas of customer service which warrant further investment and those where they may be currently over-delivering. Additionally, the information should prove useful in helping the Directorate of Community and Family Activity with their quality improvement efforts.

Significance

The significance of the study is that the approach taken will provide a measure of consumer satisfaction with the Directorate's broad range of depot services encompassing social, welfare, financial, relation, recreation and leisure. Furthermore, the approach taken will also attempt to evaluate future behavioral intentions and correlate this with actual satisfaction. This will be a clear benefit to the Directorate in helping focus future development, marketing and management efforts on specific actions which can be taken to continually improve the quality of the services provided as well as increase actual usage patterns.

Additionally, satisfied customers can be an excellent form of marketing. By understanding and monitoring customer satisfaction, the Directorate will be able to capitalize on word-of-mouth marketing and beneficial publicity. Management's ultimate goal is to effectively reduce the occurrence of failure as well as find the best way to recover and retain customers, regardless of what mistakes may have been made. Satisfied

customers often become loyal customers. Such measures can also be used to identify when things are not performing well and when this is the case, the organization will have the opportunity to recover. Typically, effectively recovered customers become even greater advocates for the organization.

Research Question

This research investigated the conceptualization and measurement of service quality, through an application of the importance-performance analysis (IPA) technique with modified SERVQUAL scales. More specifically, and in direct recognition of the importance given to this issue by the United States Military, the research sought to develop and operationalize an ongoing consumer satisfaction measure of the Directorate of Community and Family Activities Morale Welfare and Recreation (MWR) service provision at AAD and addressed the question: What is the relationship between customer satisfaction with MWR service provision at Anniston Army Depot and their intent to consume these services in the future?

Limitations

While every effort was made to minimize limitation, undoubtedly, this project does contain flaws. The following section is intended to reveal these issues but is not meant to degrade the work. Instead, it is hoped that these issues will be taken into account and used as possible revisions that could be made to future research in an attempt to make it as accurate as possible.

One possible limitation is the sample group itself. A vast majority of the respondents were Federal Employees. While they do make up a large portion of the Anniston Army Depot staff, they do not necessarily encompass the entire customer base

for MWR and may not accurately reflect the demographic that uses MWR facilities. The administration of this questionnaire comes into question here. It is uncertain why only federal employees were targeted by the Directorate during the distribution process but in future research, it may be interesting to investigate the feelings of the remaining Depot employees.

Another limitation is the generalization of this study. The way the instrument was designed and the way in which data was collected may limit the ability to generalize the results to only the respondents surveyed or, at best, to the Anniston Army Depot alone.

A final limitation is the potential degree of co-linearity identified within the study. Co-linearity is a situation where there is close to a near perfect linear relationship among some or all of the independent variables in a regression model. In practical terms, this means there is some degree of redundancy or overlap among variables. Perhaps when conducting research in the future, this can be taken into account and steps will be taken to reduce the occurrence of this.

Chapter II

LITERATURE REVIEW

Introduction

Over the past few decades, service quality has been of high interest to businesses and managers. Collier (1994) states, "Service quality is increasingly becoming a primary differentiator for customers in the event of technical product parity or as a result of limited expertise and opportunity for comparison" (as cited in Langer, 1997, p. 19). Most organizations now recognize the central role their customers' satisfaction plays in their long term success.

Customer service, and service quality, is now a focus for any corporate or marketing strategy and high levels of service are typically seen as a means for an organization to achieve a competitive advantage. Langer (1997) states, "Most industries continue to face dramatic changes in their environment, ranging from the increasingly global nature of the marketplace to the growing importance of services as a tool of competitive differentiation" (p. 7). Delivering superior service, especially in the hospitality industry, creates a myriad of opportunities for the service organization to surpass the competition and become a recognized leader in the service industry.

According to Chi Cui, Lewis, and Park (2003) research indicates that there is a strong correlation between service quality, customer satisfaction, increased sales, profits

and customer loyalty (p. 191). It stands to reason that the concept of the service encounter directly affects satisfaction, loyalty and future behavioral intentions; which, in turn, have a direct affect on the organization's success and financial stability.

Additionally, the increased significance of the services sector to the global economy has led to a heightened concern by practitioners as well as consumers regarding the quality of services being offered (Sung *et. al* ., 1997; as cited in O'Neill, 2002, p. 159). According to O'Neill (2002), because of this, "Service organizations must now serve an increasingly discerning public, who are now more eager than ever to complain and transfer their allegiances to perceived providers of quality services" (p. 159). This has led many within the industry to commit to a process of continuous quality improvement as a means to achieve competitive advantage. Because of this need for continuous quality improvement, the development of a measure for service quality is required. This measurement and testing of service quality signifies an organization's commitment of quality to the customer. While most private organizations recognize the vital importance of creating and sustaining high levels of service quality and customer satisfaction, public organizations have also started to focus on this topic. Included in this group is the United States Army.

Army's Recognition of Importance

Since 1988, when the Secretary of Defense directed all the Services to incorporate Total Quality Management (TQM) principles throughout their organizations, the Army has implemented various management initiatives to improve the way day-to-day business is conducted. According to an Army Publication entitled "Total Army Quality Management" (2002):

> In 1988, the Secretary of Defense issued guidance to the Services to implement the principles of Total Quality Management (TQM) to improve performance and efficiency. The Army's approach to achieve organizational performance excellence and continuous improvement included several initiatives (p. 2).

These initiatives included establishing Total Army Quality as the Army's management approach which provided the methodology, tools and techniques to perform systematic analyses to achieve process improvement. Additionally, in 1993, the President of the United States initiated the National Performance Review with the mission to, "Make the entire federal government both less expensive and more efficient and to change the culture of the national bureaucracy away from complacency and entitlement toward initiative and empowerment" ("Total Army Quality Management", p. 2). This mission included four guiding principles: cutting red tape, empowering employees, putting customers first and cutting back to basics. These building blocks formed the foundation for the reinvention effort.

Next, in 1995, the Army developed and implemented a set of Army Performance Improvement Criteria (APIC) as a framework for improving operational performance. The Malcolm Baldrige National Quality Award Criteria and the criteria for the President's Quality Award, formed the basis for the APIC. The Malcolm Baldrige Award is given by the President of the United States to businesses— both manufacturing and service, small and large—and to education, health care and nonprofit organizations that apply and are judged to be outstanding in seven areas: leadership; strategic planning; customer and market focus; measurement, analysis, and knowledge management; workforce focus; process management; and results. It has become the ultimate goal of

most service organizations to be presented the Malcolm Baldrige award and the Army is working hard in an attempt to procure this pentacle of prizes in the service category.

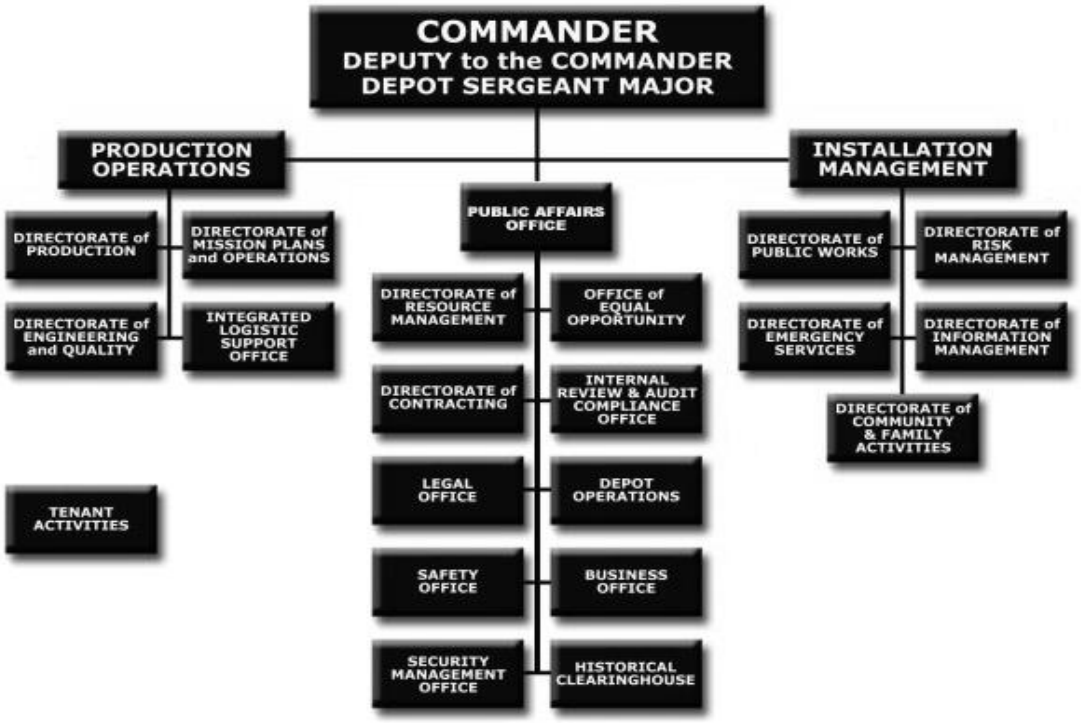
Making this process somewhat more difficult, over the last ten years or so the Army has been in transition. One of the transition programs is entitled “BRAC”. “BRAC" is an acronym which stands for Base Realignment and Closure. This is the process the Department of Defense has previously used to reorganize its installation infrastructure to more efficiently and effectively support its forces, increase operational readiness and facilitate new ways of doing business. According to the Defense Base Realignment and Closure Commission, “Over time, the defense strategy calls for the transformation of the U.S. defense establishment. Transformation is at the heart of this strategy. To transform the Department of Defense, we need to change its culture in many important areas” (“BRAC”, 2005). This includes changes to their budgeting, acquisition, personnel, and management systems because they must be able to operate in a world that changes rapidly. It is thought that without change, the current defense program will only become more expensive in the future, and the Department of Defense will lose many of the opportunities available today. Because of this, the Army has been forced to account for all expenditures and develop a metric for everything they do.

Although this transition requires the Army to cut back and reevaluate expenditures, in 2005, The Army released a posture statement saying, “The Army's primary mission is to provide necessary forces and capabilities to the Combatant Commanders in support of the National Security and Defense Strategies” (“Posture Statement”, 2005). When reading this, some may believe that all that is involved to ‘provide necessary forces and capabilities’ is boot camp and continual training. However,

the Army realizes how important it is to take into account the overall wellbeing of the Army family. In November 1984 the U.S. Army Community and Family Support Center was established as the headquarters for Morale, Welfare and Recreation (MWR) operations providing oversight and policy support, and also running certain specialty programs such as contracting, financial management, and other services, as well as operating management of the Armed Forces Recreation Centers and other special projects ("Army MWR", n.d.). The MWR department believes, "Soldiers are entitled to the same quality of life as is afforded the society they are pledged to defend. Keeping an Army ready to fight and win takes more than hard work and training. Soldiers need a balance of work and play ("Army MWR", n.d.). Furthermore, it's MWR's mission to create and maintain "First Choice" MWR products and services for America's Army, essential to a ready, self-reliant force."

The Anniston Army Depot has a flourishing MWR service division and their employees work hard to uphold this mission. Figure 1 relates the organizational structure of the Anniston Army Depot in an attempt to make the understanding of Anniston Army Depot operations a bit easier.

Figure 1 – Anniston Army Depot Organizational Structure



Source: http://www.anad.army.mil/organizations.shtml

The depot's MWR staff is part of the Directorate of Community and Family Activities. It operates and manages all supervised MWR activities on the installation to include the Skills Development Center, Community Club, Community Activities Center, Physical Fitness Center, outdoor recreational programs, the Child Development Center, food operations and the Recycling Center ("Anniston", n.d.). While soldiers, their family members and employees of the Army see the importance of these programs, the Army will need to be convinced.

In an attempt to improve service quality efforts, the United States Department of Defense created this Directorate of Community and Family Activities (DCFA) to serve the needs of the 'Army Family'. The Department of Defense recognized the importance

of overall wellbeing to not only their soldiers, but to family members as well. This Directorate has always viewed customer service as a number one priority so, not surprisingly, continuous quality improvement is paramount to its effort at providing a clear understanding of each of the key constructs and their influence on long term success. In order to be successful in this, there must be a way to measure and accurately indentify problem areas.

Defining Service Quality

In 2002, Kandampully stated "Of all the challenges facing hospitality establishments today – including intense competition, globalization and technological innovation – the single most pervasive and pressing challenge is the ever increasing demand of customers for service quality" (p. xi). When it comes to providing service, understanding customer expectations and the customer's perception of the service encounter is a vital component to delivering superior service.

Quality is an intangible entity that is often difficult to define. Those who have tried to define quality say quality is doing things right the first time while others believe quality is satisfying the customers' needs and wants in a way that exceeds their expectation. Groth and Dye (1999) believe customers create their own criteria that are the basis of their definition of quality and that confounding variables affect perceptions of quality (p. 277). According to O'Neill (2000), most commentators agree that service quality must be defined by the customer, otherwise, inappropriate strategies will result and time and money will be wasted. It is quite important to recognize that the level of service quality is determined by customers during the moments the service supplier and customer meet face-to-face. This has frequently been referred to as a 'moment of truth'; a

concept coined by Normann (1984), which he relates to the moment in bull fighting when the matador meets the bull. This 'moment of truth' is really a moment of possibilities because it is the moment a service supplier can convince the customer of service excellence.

During this 'moment of truth', a decision is made by the customer as to whether or not their needs/wants have been met or exceeded. There are a number of directions this decision can go and it is often difficult because of the highly transitory and intangible nature of service. Additionally, hospitality services suffer from a high level of heterogeneity. Services vary in standard and quality over time because they are delivered *by* people *to* people and are a function of human performance. Each service experience is different because it varies from producer to producer and from customer to customer. The customer's overall evaluation of a service encounter does not rest solely on the processing of tangible attributes or the intangible elements from the service provider but instead on a combination of the above, paired with the customer's mood, emotions and attitudes (Mantel & Kardes, 1999). Parasuraman, Zeithaml and Berry describe service quality as it is linked to satisfaction as "an elusive and indistinct construct" (1985, p. 41) but the authors go on to describe four characteristics that define and complicate the typical service environment which provides quite a challenge to service providers. They describe these characteristics as:

- **Intangibility:** When a service is purchased, there is generally nothing tangible to show for it. According to Zeithaml *et.al.* (1990), "Because they are performances and experiences rather than objects, precise manufacturing specifications concerning uniform quality can rarely be set" (p. 15). Although the performance

of most services is supported by tangibles, the essence of what is being bought is a performance rendered by one party, for another.

- **Heterogeneity:** Compared to goods service are normally less standardized and uniform. Services are not homogeneous. Because the customers buying services meet face-to-face with service employees; thus experiencing their behavior and attitudes, service outputs can hardly be standardized.
- **Inseparability:** Another characteristic concerning services is that production takes place simultaneously with consumption. Generally, goods are first produced, sold, then consumed. Services on the other hand are usually sold first, and then produced and consumed simultaneously.
- **Perishability:** Perishability relates to the concept that services, unlike tangible goods, cannot be stocked or stored. Perishability is linked to the notion of inseparability or simultaneity in that services must be provided and utilized at the point of consumption, during the service encounter.

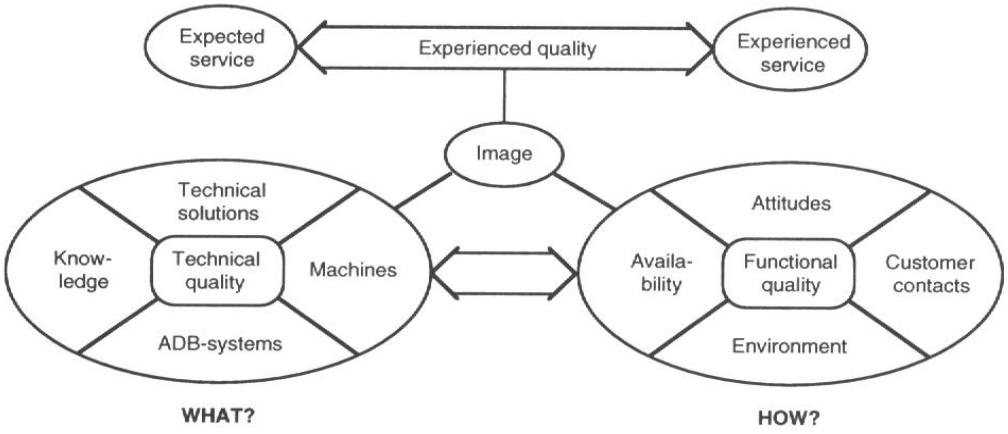
Because of the importance of both service quality and satisfaction to the services industry particular attention has been placed on the development of accurate measures of both by researchers and managers. In an attempt to help researchers understand the parameters of service quality and satisfaction, models were developed. In the following section, a number of more prominent models are outlined and discussed.

Models of Service Quality

There have been numerous attempts to describe the nature of the service quality construct and to then formulate theoretical models. Figure 2 is one of the earliest models, described by Gronroos, (1983), and shows the level of experienced quality to both

technical and functional dimensions of service provision. According to Gronroos, service quality can be broken down into two dimensions: technical quality and functional quality. Technical quality refers to what is being delivered while functional quality is concerned with how the service is delivered. It takes both of these elements to create a superior service quality experience yet this is difficult due to a unique characteristic of service; the simultaneous production and consumption of services.

Figure 2 – Service Quality Model



Source: Gronroos, C (1983) *Strategic Management and Marketing in the Service Sector,* Report No 83-104, Swedish School of Economics and Business Administration, Helsingfors

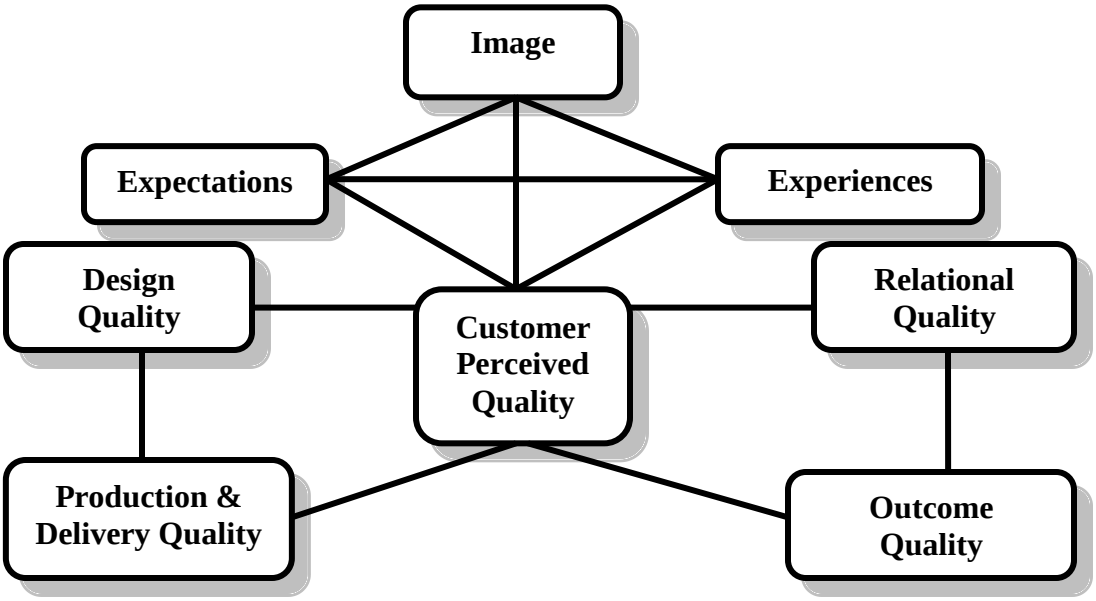
The combination of both technical goods, which are tangible, and functional quality, which is intangible, leads to the overall satisfaction level (Gronroos, 2001). O'Neill (1992) explains:

> Quality evaluations are both process and output based. They derive from the service process as well as the service outcome. The manner in which the service is delivered may thus be a crucial component of the service from the customer's point of view. To put it another way, it is not just what is delivered but how it is

delivered that determines the customer's overall perception of service quality (p. 168).

Gummeson (2000), also states that service quality and satisfaction is defined in the eyes of the customer. To express this, he created a model of customer perceived service quality as shown in Figure 3. At the center of this model is customer's perception of quality. As stated by O'Neill (2000), "Gummesson suggests that this perception is affected by customer's expectations, which are related to his or her experiences" (p. 28). Perceptions are affected by a myriad of things including the image of the business, which may be better or worse than the real thing, but acts as a filter for perceived quality anyhow. To improve upon this, it may be necessary for a company to influence experience, image and expectations. "The service provider's ability to do so will be determined by the systems, design quality, production and delivery quality, relational quality and outcome quality" (O'Neill, 2000). If perceptions and expectations do not match, then a 'quality gap' has occurred. Parasuraman, Zeithaml and Berry researched these 'gaps;' and created the Gap Model to explain how these gaps occur in an attempt to highlight ways in which a business can attempt to deliver superior service quality.

Figure 3 – Model of Customer-Perceived Service Quality



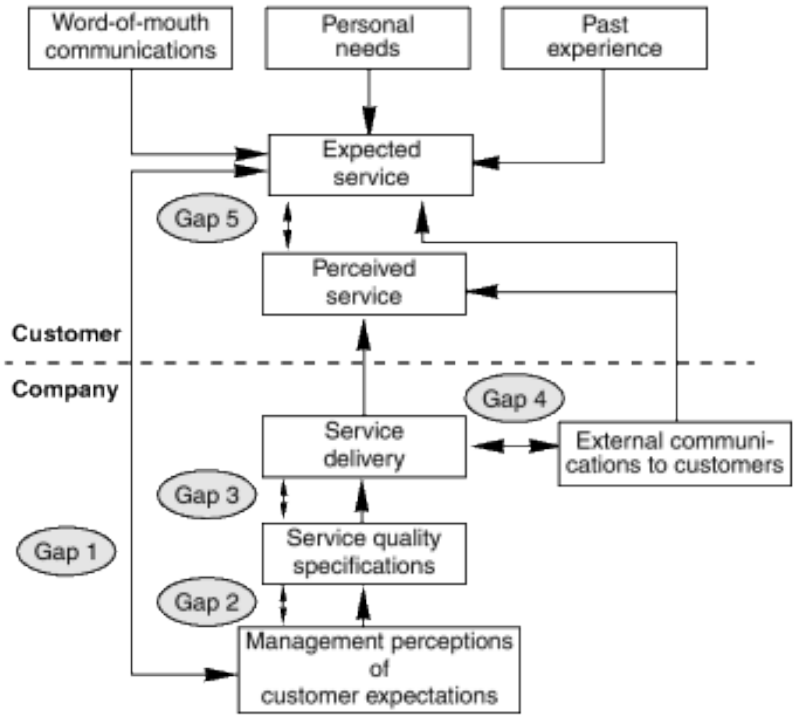
Source: Gummesson, E. (1993). *Quality Management in Service Organisations,* New York, ISQA.

The Gap model of service quality, developed by Parasuraman, Zeithaml and Berry in 1985, was developed in an attempt to explain the causes of customer satisfaction and dissatisfaction. According to Parasuraman, Zeithaml and Berry (1988), The 'Gap Model' (Figure 4) illustrates the path from customer expectations to customer experience and highlights a number of potential problem areas (Gaps).

- **Gap 1:** In this case, management does not correctly perceive or interpret consumer expectation when formulating the service delivery policy. In other words, in order to provide services that customers perceive as excellent, the service provider must know what it is the customer expects.
- **Gap 2:** This gap relates to a company's inability to match or exceed known expectations because of difficulties in responding consistently due to a lack of commitment to service quality by top management.

- **Gap 3:** Gap 3 refers to a difference between service specifications and the actual service delivery. This gap can occur because employees may be unable or unwilling to perform the services at the desired level.
- **Gap 4:** This gap occurs between what the firm promises to deliver and what it actually delivers to its customers. The propensity to over promise, together with ineffective horizontal communication between those responsible for the company's external communications and the front office employees, can explain customer disappointment because the promised service did not match the expected service.
- **Gap 5:** Gap 5 refers to the gap between customers' expectations and perceived service delivery. Judgments of high and/or low service quality are dependent on how customers perceive the actual service performance in the context of what they expected.

Figure 4 – The Gap Model



Source: Zeithaml, V.A., Parasuraman, A. and Berry, L. (1990) *Delivering Quality Service: Balancing Customer Perceptions and Expectations,* New York, The Free Press.

In 1985 Berry, Zeithaml, and Parasuraman tested a model, presented in Figure 4, which demonstrates the dimensions of service quality as it relates to the customer's role in the service encounter. Most often referred to as SERVQUAL, the model revealed five dimensions of satisfaction leading to the development of their RATER Model (1985).The five dimensions outlined in their research represent the dimensions that Barry, Zeithaml and Parasuraman found to be important in the eyes of the customer (O.Neill, 1992). David Martin (2007), described SERVQUAL as one of the most commonly used constructs when measuring the relationship between service quality and satisfaction. The five elements of RATER include:

- **Reliability:** The ability to perform the promised service dependably and accurately.
- **Assurance:** Knowledge and courtesy; their ability inspire trust and confidence.
- **Tangibles:** The condition of the facility, equipment and appearance of the facility.
- **Empathy:** Caring, individuated attention; appearance of the personnel.
- **Responsiveness:** Willingness to help, provide prompt and attentive service.

One of the conclusions drawn by the authors when developing this model is that consumer perceptions of service quality result from comparing expectations prior to receiving the service and actual experiences with the service. If expectations are met, service quality is perceived to be satisfactory; if unmet, less than satisfactory; if exceeded more than satisfactory (Berry, Zeithaml & Parasuraman, 1985).

Service quality, though exceptionally difficult to define, is closely related to satisfaction; the terms are even used interchangeably at times. Because these constructs are so closely related, there has been much debate as to which precedes which. However, before that topic is covered, a definition of satisfaction and determinants must be discussed.

Defining Satisfaction

Customer satisfaction is critical to any service sector organization, but especially those in the hospitality industry. Not only is it important to understand what is meant by satisfaction, it is also vitally important to understand what it means to the customer and its antecedents. The need to grasp what truly creates satisfied customers has led to an ever increasing body of literature surrounding satisfaction, how service providers create

satisfied customers and the effects that satisfaction has on businesses today (Oliver, 1997).

The development of a working definition of satisfaction has been evolving since the early 1970's. Since then, one definition, presented by Oliver (1997), has been the one most prominently used by researchers. Oliver states that, "Satisfaction is the consumer's fulfillment response. It is a judgment that a product or service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels of under-or-over fulfillment" (Oliver, 1997, p.13). Satisfaction results at the end of the service encounter when the consumers are processing activities and not necessarily when product and service outcomes are observed. This allows for both rapid judgments of products that are consumed relatively quickly, as well as judgments of the satisfaction resulting from products with lengthy consumption periods.

Service is complex, multidimensional and is perceived differently by each person and even though it is intangible and highly subjective, customers can always decipher between good service and poor service. Other researchers in the service industry have indicated that service quality and the satisfaction derived from the level of service quality are becoming the single most important differentiating factor in nearly every business environment (O'Neill, 2001). Furthermore, Robledo (2001) states, "Generally speaking, most researchers acknowledge that customers have expectations and that they play a certain role as standards or reference points used by consumers to evaluate the performance of a company" (p. 23).

Satisfaction and Future Behavioral Intentions

As previously discussed, delivering high quality service is important because research has indicated that it costs about five times as much money, time and resources to attract new customers as it does to retain existing ones. (Pizam & Ellis, 1999, p. 326). One viewpoint, from Lockwood states that "the hospitality industry deals for the most part with customers' implied needs. The customer is unlikely to state them explicitly. These needs then become a series of expectations in the customers' minds. If these expectations are met or exceeded then the customer will be satisfied and will have had a 'quality' experience" (p. 4). Deming (1982) suggests that while an unhappy customer will go to someone else, a customer who is only just satisfied may also change because they can't lose a lot and they might gain. He argues that profit comes from repeat customers; customers who boast about the product and service they receive and bring their friends with them next time, in other words, loyal customers.

Future Behavioral Intentions

As part of an organization commitment to relationship marketing and quality, measurements of loyalty and future behavioral intentions (FBI) have become a priority. It seems intuitively rational that there should be a contributory link between quality of service, level of customer satisfaction, and the organization's success. "Higher quality of performance and levels of satisfaction are perceived to result in increased loyalty and future visitation, greater tolerance of price increases, and an enhanced reputation." (Baker & Crompton, 2000). Each of these are critical in regard to increased revenue, namely through intent to return and to positively recommend. These actions are generally a result of customer loyalty.

Edvardsson, Johnson, Gustafsoson & Strandvik (2000), define loyalty as "a customer's predisposition to repurchase from the same firm again" (p. 918). Oliver (1997) elaborates by stating that "customer loyalty is a deeply held commitment to re-buy or re-patronize a preferred product or service consistently in the future, despite situational influence and marketing efforts having the potential to cause switching behavior" (p. 392). Importantly, Reichheld (1996) found that loyal customers impact organizations by generating more income, allowing for less marketing dollars to be spend in keeping a customer (rather than recruiting one) and becoming desensitized to price.

Oliver (1997) contends that customer's progress through four phases of loyalty, which are discussed below.

- Cognitive – The information base to the consumer compellingly points to one brand over another. This phase consists of loyalty based on cognition alone. This one factor, however, does not make a customer loyal.
- Affective – Affect is connected to satisfaction through both cognition and attitude. As a part of this phase, a consumer has either a positive or negative feeling or attitude toward a specific brand or product. This phase must be based on some type of prior interaction or experience (i.e. cognitive loyalty).
- Conative – The behavioral intention dimension of loyalty that is influenced by changes in affect toward the brand. This phase implies an intention or commitment to behave toward a goal in a particular manner. It is a loyalty state containing the deeply held commitment to buy.
- Action – The motivation intention in the previous phase is converted into readiness to act. This is also accompanied by a desire to overcome obstacles that

might prevent the act. If this is repeated, action inertia develops, thereby facilitating repurchase. Readiness to act is related to the deeply held commitment to re-buy or re-patronize a preferred product or service consistently in the future, whereas overcoming obstacles is related to re-buying despite situational influences and marketing efforts having the potential to cause switching behavior.

Importance of Loyalty

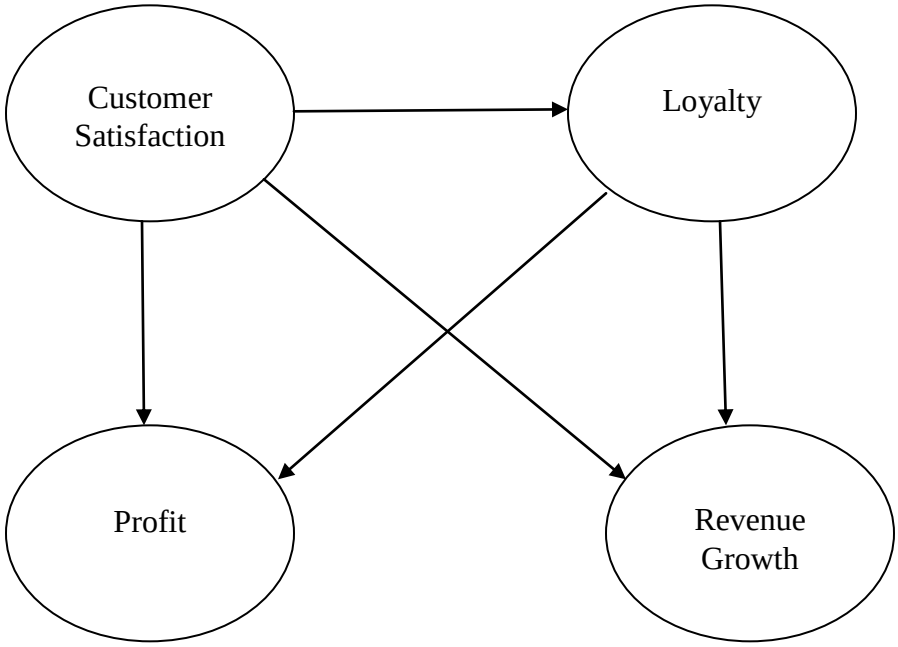
In the tourism industry, customer satisfaction and service quality do not always lead directly to loyalty. Because of the aforementioned benefits or retaining existing customers, the development of customer loyalty has become an important focus for marketing strategy research in recent years (Gwinner, Gremler, & Bitner, 1998; Hagen-Danbury & Matthews, 2001; McMullan, 2005). According to Olorunniwo, Hsu and Udo (2006), loyal customers impact the profitability and overall success of the organization in three ways. First, a customer's repeat business generates income for the company. Second, due to the cost of marketing and advertising, an organization makes less of a financial commitment in retaining customers compared to recruiting new customers. And third, loyal and satisfied customers often spread the word and recommend the services to others.

Edvardsonn et al. argue that much of the effect on satisfaction on profits and sales growth is mediated by increased customer loyalty (2000, p. 917). They further contend that consumer costs generally occur early in an organization's relationship with that consumer, while profits tend to accumulate only after a customer has been loyal for some time. Edvardsonn et al. state that there are six factors that affect overall costs, revenues and resulting cash flows, as listed below (2000):

- Acquisition costs – These costs transpire early in an organizations relationship with a new customer. Incentive programs, awareness advertising, and prospecting costs are all examples of acquisition costs. These tactics designed to recruit and retain new customers often entail considerable costs to before any revenue is generated by the consumer.
- Base revenues – Throughout each time period that a consumer remains loyal to an organization, said organization will receive base revenues. This revenue is more evenly distributed as the re-purchase cycle continues. For example, a revolving bill such as magazine subscription would fit into this category.
- Revenue growth – As a customer becomes increasingly satisfied and consequently, more loyal with an organization they will generally find more opportunity to reward the organizations "good behavior" and consequently gain trust in the quality of the output. In doing so, the revenue gained in this step generally comes from two sources, the cross-selling of additional products and services and an increase in purchase volume.
- Operating costs – As the purchase-consumption-repurchase cycle continues, operational costs will likely decrease. The more an organization forms a relationship with its customers, the easier it should be to understand their preferences and therefore be less costly to cater to them.

- Customer referrals or word of mouth – Organizations that continually generate high levels of satisfaction, and therefore loyalty, will ultimately generate customer referrals and positive word of mouth advertising which, in turn, will generate additional sales revenue.
- Price premiums – Finally, when customers reach this stage of loyalty, they are more willing to pay a price premium than newer consumers would likely be willing to give. Also, loyal customers are more likely to be in a repeat purchase mode as opposed to a mercenary mode. Because of this, they are less likely to take advantage of price discounts or other offers for switching to a competitor.

Figure 5 – Loyalty Profit Chain



Source: Edvardsson et al. (2000)

Edvardsson et al. (2000) follow up there discussion by illustrating this theory in the Loyalty Profit Chain as seen in the above diagram. The authors further maintain the value of the model by stating that "The overall result is a per customer profit stream that increases over time. The more loyal the customer and the longer the customer is retained, the more sales and profits the customer generates." (2000, p. 919). As a result, the impact that satisfaction and its part in the configuration of loyal consumers plays a critical role in the continued success of tourism organizations. Because of the unique disposition of the Anniston Army Depot, it is critical that there be a measurement in place that can decipher exactly what factors lead to satisfaction and ultimately visitor loyalty. One theory, the Disconfirmation Theory, attempts to explain how decisions are made as to a customer's satisfaction level.

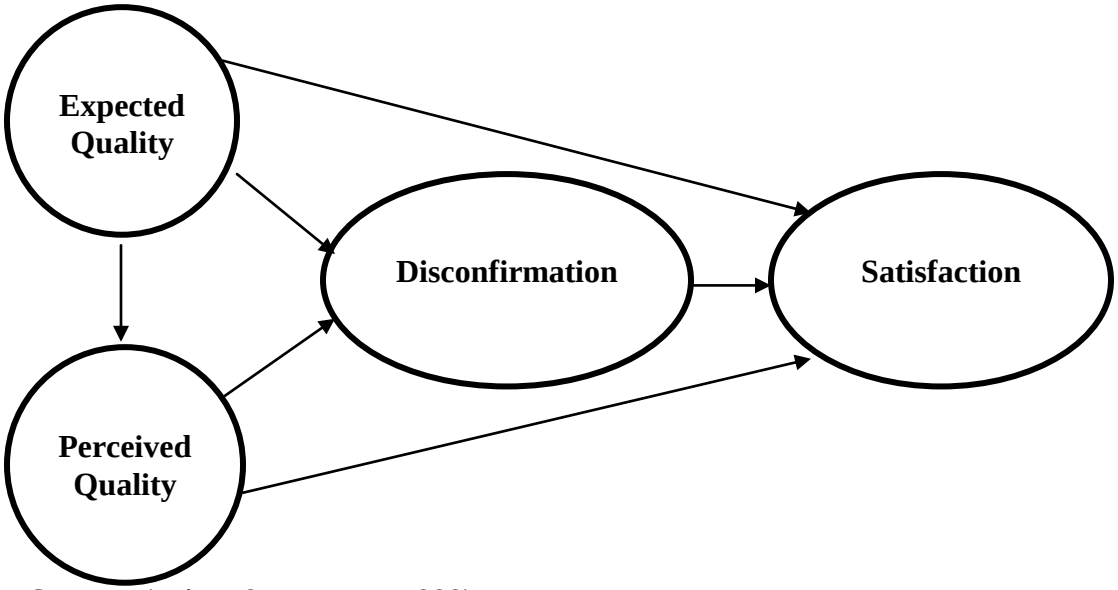
Disconfirmation Theory

Lockwood (1996), states, "The hospitality industry deals for the most part with customers' implied needs. The customer is unlikely to state them explicitly. These needs then become a series of expectations in the customers' minds. If these expectations are met or exceeded then the customer will be satisfied and will have had a 'quality' experience" (p. 4). Everyone has their own personal zone of tolerance for service failure. The zone of tolerance is the range of service performance that a customer considers satisfactory. The importance of the zone of tolerance is that customers may accept variations within a certain specified range and any improvement within this range will not affect overall perception. Furthermore, it is only when performance moves outside of this zone that it has any real effect on perceived service quality.

It is important to try to find out what it is the customer wants or needs in order to produce a lasting memory of quality in their minds because quality is remembered long after the price is forgotten. Furthermore, Pizam and Ellis quote Bob Hayes in saying, "Knowledge of customer expectations and requirements, Hayes says, is essential for two reasons – it provides understanding of how the customer defines quality of service and products, and facilitates the development of a customer satisfaction questionnaire" (As cited in Pizam & Ellis, 1999, p. 326). One main problem with this is that the perception of quality lies within the customer. Groth and Dye (1999) state, "The total perceived value of a service comes from two sources. First, customers perceive value that originates from the service act itself. Second, customers perceive value that originates from the quality of the service act" (p. 277). Perceptions can change with customers' moods and emotions and may not accurately reflect the quality of the service. Moreover, customers' perceptions of quality service may differ drastically from the actual quality of the events that created the service (Groth & Dye, 1999, p. 277). This thinking is the basis for the disconfirmation paradigm, demonstrated by Figure 6, which is described by Pizam and Ellis (1999) as:

> Customers purchase goods and services with pre-purchase expectations about anticipated performance. Once the product or service has been purchased and used, outcomes are compared against expectations. When outcome matches expectations, confirmation occurs. Disconfirmation occurs when there are differences between expectations and outcomes. Negative disconfirmation occurs when product/service performance is less than expected. Positive disconfirmation occurs when product/service performance is better than expected (p. 328).

Figure 6 – Classic Disconfirmation Model



Source: (Wirtz & Bateson, 1999)

The Disconfirmation Model has three outcome states on a variable scale. According to Robert Johnson (1995), "The three states are "dissatisfaction", resulting from poor perceived quality (negative disconfirmation), "delight" from high quality (positive disconfirmation) and "satisfaction" from adequate quality (confirmation). It is this satisfaction state that is sometimes considered the zone of tolerance" (p. 47). When expectations exceed the actual outcome of an interaction, negative disconfirmation occurs and the customer is often left dissatisfied. The events that created this disconfirmation are considered to be service failures. Service failure can range from a very small detail such as a missing tissue box in a guest's room to failures on a much larger scale such as a lost reservation. It is the job of the company to rectify these situations. This fundamental work was to set the scene for a variety of subsequent studies which addressed the antecedent properties of service quality and satisfaction constructs and the relationship between each.

Service Quality and Satisfaction

Over the years of research, reference has been made to the idea that the terms customer satisfaction and service quality can be used interchangeably. However, a review of the emerging literature suggests that there appears to be relative consensus among marketing researchers that service quality and customer satisfaction are separate constructs which is unique and share a close relationship (Cronin and Taylor, 1992; Oliver, 1993).

Researchers have yet to come to a conclusion on the antecedents to service quality and satisfaction. There is also strong evidence to suggest that satisfaction may be a vital antecedent of service quality (Oliver, 1981; O'Neill, 1992). A study carried out by Bitner (1990) on 145 tourists in an international airport suggested satisfaction as the antecedent to service quality. However, there is also a large amount of research suggesting that service quality is a vital antecedent to customer satisfaction (Berry, Zeithaml & Parasuraman, 1985; Cronin and Taylor, 1992; O'Neill, 1992). This makes both of them important to today's hospitality professional (O'Neill, 1992).

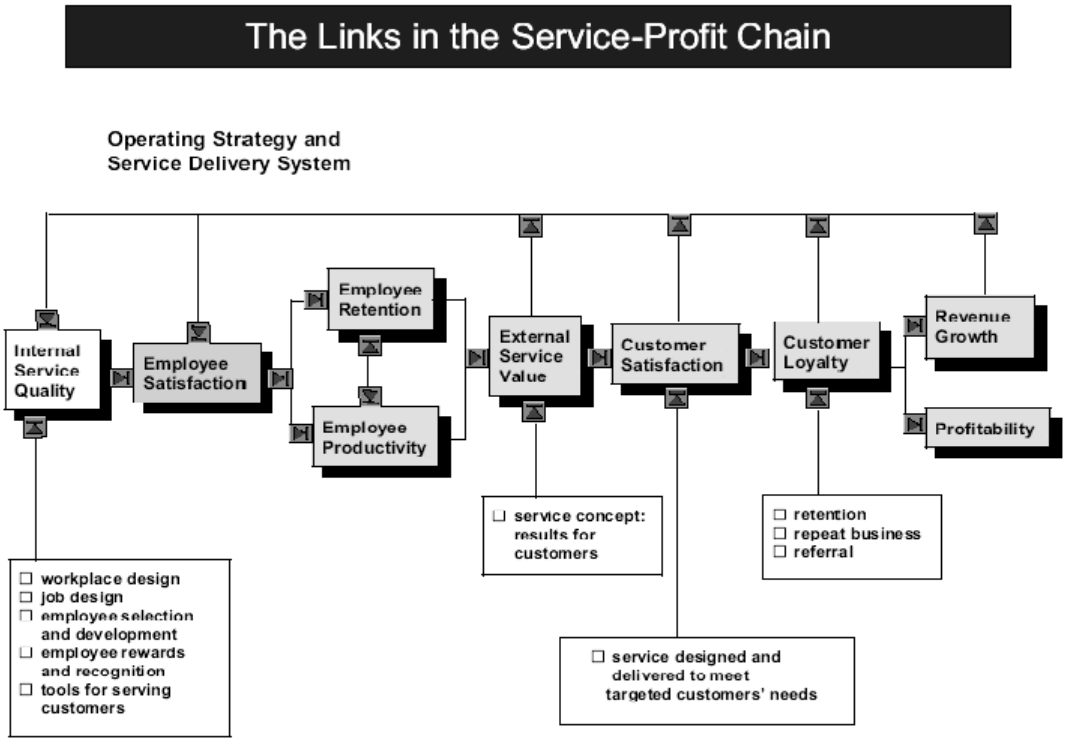
Satisfaction plays a key role in the hospitality industry. As the industry continues to grow and mature, the need for a competitive advantage becomes more and more important. Highly satisfied customers drive growth and profitability in a service business. To keep those customers profitable, companies need to manage all aspects of the operation that affect customer satisfaction – this is called the service-profit chain**.**

The Service Profit Chain

High service quality is not only necessary when dealing with external customers but it is also essential in regards to employees. Employees (the internal customers) must

also be satisfied with the level of service quality they receive. One way to illustrate the relation between internal operations and customer satisfaction in services is proposed in the Service-Profit Chain, demonstrated in Figure 7, by Heskett, Jones, Loveman, Sasser, and Schlesinger (1994). The Service-Profit Chain establishes relationships between profitability, customer loyalty and employee satisfaction, loyalty and productivity. It is not solely the various elements of the chain that are of interest, it is also the links in the chain that focus should be placed on.

Figure 7 – The Service Profit Chain



Source: Heskett, Sasser, & Schlesinger (1997).

The Service Profit Chain also states that profit is directly affected by customer loyalty, which is a result of high external customer satisfaction derived from high service quality – which is created by satisfied internal customers. Paraskevas (2001) believes "High level of quality built into the internal service chain will consequently result in high level of quality products and services offered to the external customer" (p. 285). Simply stated, happy employees are more likely to create happy customers. In addition, Heskett *et. al.* (1994) states

> The links in the chain (which should be regarded as propositions) are as follows: Profit and growth are stimulated primarily by customer loyalty. Loyalty is a direct result of customer satisfaction. Satisfaction is largely influenced by the value of services provided to customers. Value is created by satisfied, loyal, and productive employees. Employee satisfaction, in turn, results primarily from high-quality support services and policies that enable employees to deliver results to customers (p. 164-165).

The authors continue when they comment "The service profit chain, developed from analyses of successful service organizations, puts hard values on soft measures. It helps managers target new investments to develop service and satisfaction levels for maximum competitive impact, widening the gap between service leaders and their merely good competitors" (Heskett *et. al.,* 1994, p.164). Their model consists of the following points:

- Customer Loyalty Drives Profitability and Growth.
- Customer Satisfaction Drives Customer Loyalty.
- Value Drives Customer Satisfaction.
- Employee Productivity Drives Value.

• Employee Loyalty Drives Productivity.

• Employee Satisfaction Drives Loyalty.

• Internal Quality Drives Employee Satisfaction.

• Leadership Underlies the Chain's Success.

While it is important to recognize internal service quality and its effects on external service quality, organizations cannot expect to retain their competitive advantage if they focus on this alone. Service organizations in the hospitality industry that wish to retain their competitive advantage must work on a continual basis to improve their standards and efforts to satisfy both their internal and external customers.

Continuous Quality Improvement

Continuous Quality Improvement (CQI) is an organizational process in which an organization's staff identify, plan, and implement ongoing improvements in service delivery. CQI provides a vital way to assess and monitor the delivery of services to ensure that they are consistent with an organization's best practice principles. Continuous Quality Improvement stands as an issue regarded as an integral part of activities of an increasing number of companies and organizations. This is the basis for what is often referred to as Total Quality Management, or TQM, which is best defined as a quality-centered, customer-focused, fact-based, team-driven, senior-management-led process to achieve an organization's strategic imperative through continuous process improvement. The customer perceives the quality of a service depending on the competence of the staff to handle their relations with customers. There the staff depends on the competence of other staff members to provide them with what they need to serve the customer.

Once customer satisfaction has been obtained, it must then be maintained. Total Quality Management, TQM, is one philosophy that is often used as a way to sustain customer satisfaction. According to Walsh *et. al.* (2002), "People by nature have limitless desires which are never permanently satisfied. Therefore TQM initiatives must include an in-built culture of continuous improvement which can help an organization satisfy the needs of its customers on an ongoing basis" (p. 300). TQM is a philosophy. It is a way of doing things, not a concrete system. Hellsten and Klefsjo (2000) describe TQM as, "some form of 'management philosophy' based on a number of core values, such as customer focus, continuous improvement, process orientation, everybody's commitment, fast response, result orientation and learn from others" (p. 239). TQM must be viewed as a network of components working together to accomplish one main goal.

Deming, in a conversation with Latzko (2000), said that "the term TQM implies that quality is a method when in reality it is the outcome of a method" (Hellsten & Klefsjo, 2000, p. 238). This misunderstanding is one of the major problems with TQM. Babbar and Aspelin (1994), believe TQM is often a misunderstood concept because many companies believe it is something that can easily be purchased and implemented like some form of package deal (p. 32). Some companies buy into TQM as some sort of quick fix program instead of realizing it is a complicated process that needs the commitment of the entire company with the understanding it is a long-term course of action. Sashkin and Kiser (1993), describe TQM as, "The development of an organizational culture which is defined by, and supports, the constant attainment of customer satisfaction through an integrated system of tools, techniques and training" (As cited in Walsh *et al.,* 2002, p. 299). It would appear they think the installment of TQM is

as simple as having the 'three t's'. Babbar and Aspelin (1994), assert that TQM works through the creation of an internal cultural change (p. 33). It takes the commitment of everyone in the company for this change to occur. One of the most common barriers to effective implementation is the failure of employees to take TQM seriously. Adrienne Curry and Nasser Kadasah (2002), state, "Management have taken up TQM programs because head offices have told them to do so. They feel they have to show they are doing something but see TQM as yet another management fad" (p. 208). While some may view TQM as just another fad, the ideas it fosters need to be taken seriously.

Understanding the terms service quality and satisfaction are vitally important to the success of any service organization as is the concept of continuous quality improvement. However, it is not only necessary to understand what they mean and how they affect business, but it is inherently important to understand how to qualify and quantify these constructs.

Measurement

There are multiple ways to measure quality but first let us look at the different types of measures. The measures of quality can be either hard or soft. "Hard measures are those which are quantifiable or objective; for example, computer downtime or the proportion of telephone calls answered. Soft measures are those which are qualitative, judgmental, subjective and based on perceptual data. Soft measures of service quality are particularly relevant to the measurement of the quality of intangible aspects of service" (Silvestro, Johnston, Fitzgerald & Voss, 1990, p. 55). In the service industry, two types of research methods are typically used, and often together. According to Leedy and Ormrod (2005), these two different research methods can be defined in the following

ways: Quantitative research is used to answer questions about relationships among measured variables with the purpose of explaining, predicting and controlling phenomena. In contrast, qualitative research is typically used to answer questions about the complex nature of phenomena, often with the purpose of describing and understanding the phenomena from the participants' point of view (p.95). Additionally, qualitative measurement is regularly used for gathering data by means of interviews, employee feedback, comment cards, mystery shoppers, focus groups as well as management observation. This information is typically then used to formulate objective measures to quantitatively evaluate customer feedback. Quantitative measurements are usually surveys and questionnaires.

Inferred and Direct Measures

Both of these methods are based on the expectancy/disconfirmation of expectations and are used in conjunction with this model (Yuksel & Rimmington, 1998). Inferred measurement involves computing the discrepancy between expectations of performance and the evaluation of outcomes while the direct approach requires the use of summary-judgment scales to measure confirmation and disconfirmation. The inferred technique involves compiling separate data sets, one for customer service expectations and the other for perceived performance. The scores for performance are then subtracted from those of expectations to form the third variable, the confirmation/disconfirmation. The direct approach avoids calculating difference scores since the respondents can be asked directly the extent to which the service exceeded, met, or fell short of expectations (Yuksel & Rimmington, 1998). Both techniques, inferred and direct, have been used by researchers.

One of the most widely used instruments to measure service quality is the SERVQUAL scale developed by Parasuraman *et al.* in 1985. The model was created based on the disconfirmation paradigm. "The model on which SERVQUAL is based proposes that customers evaluate the quality of a service on five distinct dimensions: reliability, responsiveness, assurance, empathy, and tangibles; and that service quality is the difference between a customer's expectations and perceptions of the quality of a service" (Wong *et al.*, 1999, p. 137). "The SERVQUAL model identifies specific criteria by which customers evaluate service quality". Measurements are taken using surveys and questionnaires and are weighted by importance, usually on a five point Likert scale. Robledo (2001) states, "The questionnaire consists of two sections: a section to measure customers' service expectations of companies within a specific sector and a corresponding section to measure customers' perceptions of a particular company in that sector" (p. 24). Additionally, "According to Parasuraman et al. (1985), service quality should be measured by subtracting customer's perception scores from customer expectation scores (Q=P-E). The gap may exist between the customers' expected and perceived service is not only a measure of the quality of the service, but also a determinant of customer satisfaction/dissatisfaction" (Pizam & Ellis, 1999, p. 330). This is important because it shows the correlation, be it positive or negative, between the expectations and perceptions of customers and can show companies where they need to fix problems. Berry, Zeithaml & Parasuraman believe that these five dimensions are a concise representation of the core criteria that customers employ in evaluating service quality (O'Neill, 1992). This scale is considered to be an indirect or disconfirmation measure of service quality and satisfaction (Yuksel & Rimmington, 1998). This approach

seeks to explore the relationship between customers' pre-purchase expectations and their perceptions of service performance. These models contend that service quality can be conceptualized as the difference between what a consumer expects to receive and his or her perceptions of actual delivery. They suggest that product and service performance exceeding some form of standard leads to satisfaction while performance falling below this standard results in dissatisfaction (Oliver, 1997). According to Mowen (1995) this expectancy disconfirmation approach helps explain consumer perceptions of service quality as well as consumer satisfaction judgments.

Problems with SERVQUAL

The work of Parasuraman, Zeithaml and Berry (1985) on the development of SERVQUAL set the bar for almost all disconfirmation studies. They felt that service quality is only measurable in the eyes of the consumer and for a hospitality organization to produce a high level of service quality they must meet and exceed expectations. Because service is intangible, the ways in which customer form their expectations to measure service are also different (Oliver, 1997). If the customer's expectations are not met, then the customer will experience a gap between the expectations and perceived results and would not feel as if they were experiencing a high level of service (O'Neill & Wright, 2002).

According to Coulthard (2004), the SERVQUAL model has generated more studies and criticism than any other model of its kind (pg. 481). These criticisms include various points, including: conceptual basis, process orientation, dimensionality, the use of gap scores, difference scores, problems with Likert scales, and order effects. Coulthard (2004) believes that "SERVQUAL encapsulates only certain aspects of service quality,

and that it fails to capture other potentially less controllable components that may have a greater impact upon evaluations of the quality of the service provision" (p. 483).

Buttle (1996), goes on to state that SERVQUAL has been subjected to a number of theoretical and operational criticisms. Among the theoretical criticisms are paradigmatic objections. He explains this as, "SERVQUAL is based on a disconfirmation paradigm rather than an attitudinal paradigm; and SERVQUAL fails to draw on established economic, statistical and psychological theory" (p. 10). Buttle also has the same qualms as Coulthard which emphasize that there is little evidence that customers assess service based on P-E gaps and that SERVQUAL focuses on the process of service delivery, not the outcomes of the service encounter. Last under the theoretical concerns is that SERVQUAL's five dimensions are not universals. Buttle states, "The number of dimensions comprising service quality is contextualized; items do not always load on the factors which one would a priori expect; and there is a high degree of intercorrelation between the five RATER dimensions" (p. 10).

Operationally speaking, Buttle notes that the term expectation is polysemic; customers use standards other than expectations to evaluate service quality and SERVQUAL fails to measure absolute service quality expectations. Buttle (2004) goes on to state, "four or five items cannot capture the variability within each service quality dimension and that customers' assessments of service quality may vary from moment of truth to moment of truth" (p. 11). Additionally, it is believed that the Likert scale is flawed. Many believe that the lack of labeling for points two and six cause respondents to overuse the extreme ends of the scale and that respondents' interpretation of the meaning

of the midpoint of the scale. It is unclear whether it means ‘don’t know’, ‘do not feel strongly in either direction’ or even ‘do not understand the statement’.

On the other hand, there are perception models such as SERVPERF which is based only on perceptions of performance. SERVPERF and SERVQUAL share the same concept of perceived quality; however, Llusar and Zornoza (2000) explain, “The main difference between these models lies in the formulation adopted for their calculation, and more concretely, in the convenience in the utilization of expectations and the type of expectations that should be used” (p. 901). Robledo sustains, “Supporters of this paradigm maintain that expectations are irrelevant and even misleading information for a model intended to evaluate perceived service quality. They maintain that the perception of the customer is the only measure required” (p. 23). Once service quality is measured, companies must find a way to continually improve their quality and continue to keep customers satisfied.

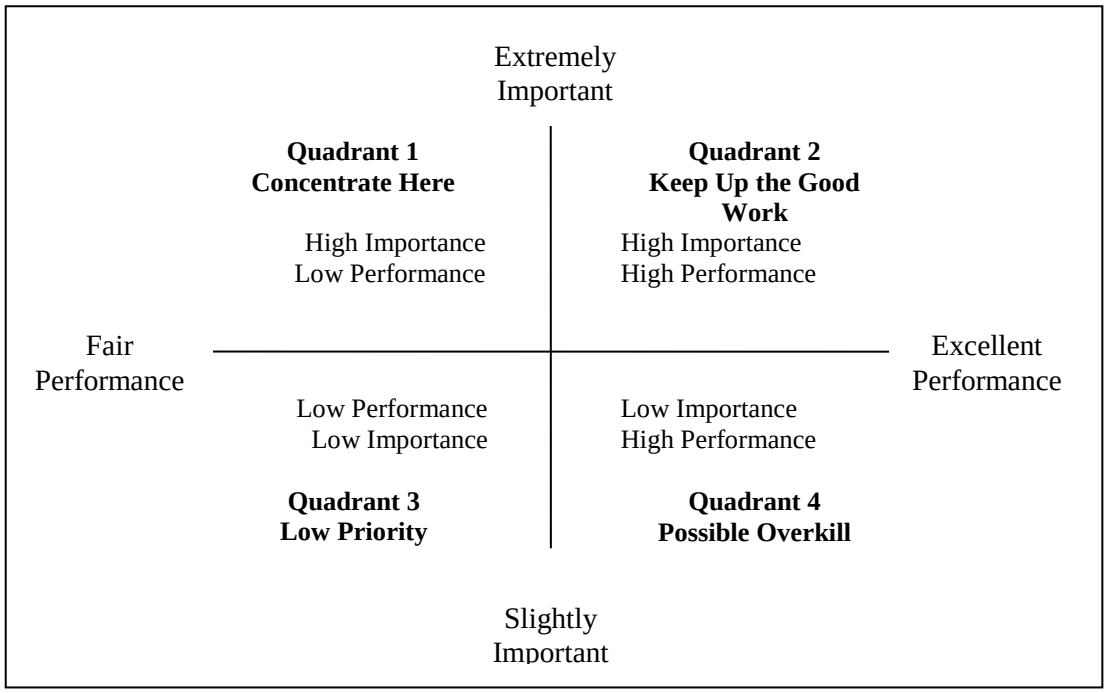
Importance-Performance Analysis

In an article published in 1977, Martilla and James introduced the Importance-Performance Analysis (IPA) technique as a performance indicator for the automobile industry. They pointed out that IPA is a low-cost, easily understood technique that can yield important insights into which aspect of the marketing mix a firm should devote more attention as well as identify areas that may be consuming too many resources. Since then, IPA has became a well-accepted managerial tool that has been broadly used to identify the strengths and weaknesses of brands, products, services and retail establishments in various industries (Chapman 1993). With its ease of application and simplicity, IPA provides an attractive snapshot of how well the company meets

customers' important concerns on selected attributes, as well as offered guidelines for company's future resources allocation decisions (Oh, 2001). The Importance-Performance Analysis (IPA) technique identifies strengths and weaknesses by comparing the two criteria that consumers use in making a choice: the relative importance of attributes and consumers' evaluation of the offering in terms of those attributes. The measurements of the Importance –Performance Analysis (IPA) and the SERVQUAL model are quite similar. The IPA technique identifies strengths and weaknesses by comparing of two criteria that consumers use in making a choice. One criterion is the relative importance of attributes. The other is consumers' evaluation of the offering in terms of those attributes while the SERVQUAL technique identifies the customer satisfaction of service attributes by comparing of two criteria that are customer's expectation and customer's perception in the five dimensions. However, unlike the SERVQUAL model, which is best described as an absolute performance measure of consumer perceptions of service quality, the Importance-Performance paradigm also seeks to identify the underlying importance attributed by consumers to the various quality criteria being assessed (Sampson & Showalter 1999). Martilla and James (1977) believed that IPA has been found to be a useful technique for evaluating the elements of a marketing program. In their research, they demonstrated the use of IPA technique in a three-step process by using the automobile as an example. First, the researchers stated that a literature search and conversations with responsible department personnel should be done in order to develop key attributes for further measurement. Then their respondents were asked two questions about each attributes: How important is the attribute? And how well did that attribute perform? The last step was the mean score of

importance and performance for each attribute were calculated. The researchers further mentioned that virtually identical results would have been obtained using median rather than mean values. The attribute ratings were plotted as points on a two dimensional plot called the IPA grid; the components were effectively divided into a four quadrant grid. The authors used automobile dealer's service as an example to present the grid (Figure 8).

Figure 8 – Importance Performance Analysis Grid



Source: Importance-Performance Analysis Grid (Martilla and James, 1977)

Quadrant 1: **Concentrate here**

Consist of attributes that were high in importance and the customers rated the dealer's performance as low

Quadrant 2: **Keep up with the good work**

Customers rated attributes that were high in importance as well as pleased with dealer's performance.

Quadrant 3: **Low priority**

Customers rated low satisfaction with dealer's performance, but they did not perceive that features to be very important.

Quadrant 4: **Possible overkill**

Customers only attached slight importance to those attributes, but the dealer was judged as high in performance.

In the final part of the study, the authors shared some important tips on using Importance-Performance Analysis. First, they pointed out the importance in determining relevant attributes. Focus groups, unstructured personal interviews and managerial judgment should be used to identify important factors and screen down the attribute list to a manageable size. Second, separation of the important measures and the performance measures helped to minimize compounding and order effects. Thirdly, median values as a measure of central tendency were theoretically preferable to means because a true interval scale might not exist. Moreover, the researchers pointed out that attention should be given to the extreme observations since they indicated greatest disparity and might be key indicators of customer dissatisfaction.

Like SERVQUAL, the IPA technique has a few issues that need to be overcome. According to Ford, Joseph and Joseph (1997), the first is "the determination of the actual attributes to be assessed" (p. 16). This can easily be overcome by the use of focus groups.

O'Neill (2004) states, "The second issues relates to bias and the separation of the performance and importance scale. As with SERVQUAL this raises the issues of survey fatigue and the fact that many consumers may simply refuse to participate in the secondary stage of the research exercise" (p. 6). Lastly, it seems there are a number of studies who tend to use the terms importance and expectation interchangeably with measuring and interpreting importance.

Summary

In closing, the previous section has highlighted the pertinent literature in regards to the major constructs that form the basis of this study. Elements such as service quality and customer satisfaction have been defined and elaborated on. The next step is to now develop the theoretical framework that will later be tested, as well as the research hypotheses that will also be tested using both qualitative and quantitative techniques.

Chapter III

METHODS

Research Considerations

In addition to profitability, the overall goal of most hospitality organizations is to deliver quality service that is designed to engender loyalty and influence future behavioral intentions. The intended end result is a better understanding of the above so they can be applied in real world settings in an attempt to increase profits and satisfaction levels. That stated, the considerations of this research are to better understand the relationships between service quality and satisfaction, and the effect these two have on future behavioral intentions.

Research Hypotheses

While the importance of measuring service quality has been highlighted in both the literature and this project, the exact method of doing so has been debated (Cronin & Taylor, 1994; O'Neill, 1992). In an effort to fill this void, the expectancy-disconfirmation model was adopted by researchers as the basis for methodology when it came to measuring satisfaction (Wirtz & Bateson, 1999). Among the proposed constructs, the SERVQUAL scale, first developed by Parasuraman, Zeithaml and Berry (1985) is the most widely used. However, because the survey that was created required the addition of 10 variables, and based on the previous review of the SERVQUAL scale, the question of

the five dimensions and their ability to factor out comes to mind. This then leads to the first hypothesis:

- H1: The five factor structure proposed for the SERVQUAL instrument will not be held up when applied to a unique setting such as a military base.

Previous reference has been made to the concepts of customer satisfaction and customer perceived service quality. A review of the literature shows that the terms are often used interchangeably, which has led to confusion regarding both terms. While the two concepts are related and appear to be merged, there are still gaps in the understanding of the two constructs, their relationship to each other and their antecedents and consequences (Gwynne, Devlin and Ennew, 1998).

The most commonly used representation of customer satisfaction is the disconfirmation approach (Ramaswamy, 1996), where satisfaction is related to the variation between a customer's pre-purchase expectations and his or her post-purchase perceptions of the actual service performance. Perceived quality, on the other hand, may be viewed as a global attitudinal judgment associated with the superiority of the service experience over time (Getty and Thompson, 1994). According to Lovelock, Patterson and Walker (1998, p.126), the important distinction is that " … satisfaction is experience-dependent - you must experience the service to feel a degree of satisfaction/dissatisfaction. Perceived service quality on the other hand is not experience-dependent … perceived service quality is formed over multiple service encounters". As such it is hypothesized:

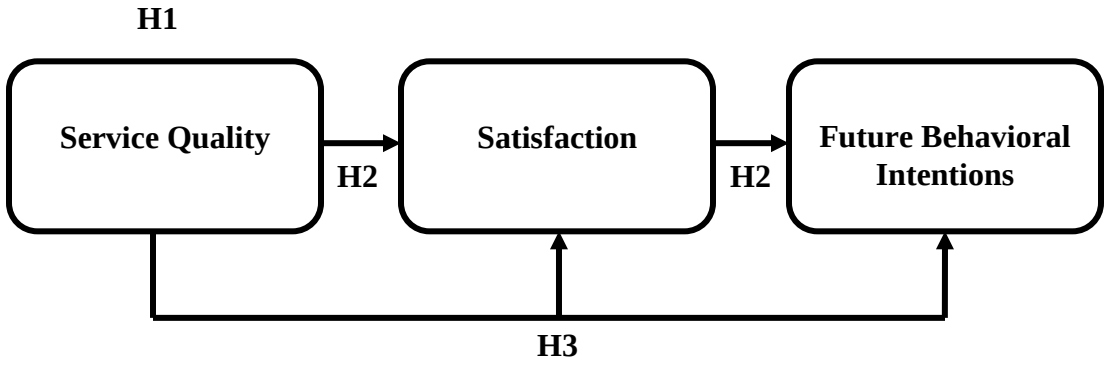
- H2: The overall quality of the service experience received at MWR will be positively correlated with respondents overall satisfaction and subsequent intent to revisit and/or recommend the MWR services and facilities to others.

Additionally, there has been considerable debate concerning the nature of the relationship between both constructs. While many researchers present strong evidence to suggest that satisfaction may be a vital antecedent of service quality (Oliver, 1980; Bitner, 1990), more recent research suggests that service quality is a vital antecedent to customer satisfaction (Oliver, 1993; Taylor and Baker, 1994; Spreng and Mackoy, 1996; Yu and Dean, 2001). This view is supported by Gotlieb et al. (1994) who suggest that perceived service quality affects satisfaction and behavioral intentions are affected by satisfaction. This view suggests that that while service quality influences the consumer future behavioral intention, it does so through the mediating role of satisfaction (Wong, 2004).

- H3: That while an individual's perception of service quality will be positively related to their future behavioral intention, there will be a stronger correlation between their perceptions of service quality and overall satisfaction, which in turn will be positively correlated with future behavioral intention.

Theoretical Model

Figure 9 – Theoretical Model



Validity and Reliability

The issue of validity addresses the question of how close a measure really comes to measuring the concept that it was designed to measure. In other words, the word validity, as applied to a test refers to a judgement concerning how well the test does in fact measure what it purports to measure. Leedy (1993) rephrases these observations and states that validity would raise such questions as: What does the test measure? Does it, in fact, measure what it is supposed to measure? How well, how comprehensively and how accurately does it measure it? In the context of the present study therefore, the question is best posed as follows: how do we know that our measures of service quality and satisfaction are really getting at each of these constructs and not at something else?

According to DeVellis (1991), the basic conceptual criterion a measurement scale must meet is content or face validity. Simply stated, an instrument could be considered to be high in face validity if the readability of the measurement appears to measure what it is intended to measure.

Construct validity is the most interesting and most difficult of all the validities to develop because it is based on some underlying construct or idea behind a test or measurement tool. For example, aggression is a construct (consisting of such variables as inappropriate touching, violence, etc.), as is intelligence, attachment, and hope. Keep in mind that these constructs are generated from some theoretical position that the researcher assumes. As such, it becomes difficult to develop and accurately measure. Convergent and discriminant validity are both considered subcategories or subtypes of construct validity. The important thing to recognize is that they work together -- if you can demonstrate that you have evidence for both convergent and discriminant validity, then you've by definition demonstrated that you have evidence for construct validity. But, neither one alone is sufficient for establishing construct validity. Convergent and discriminant validity can be described as:

> Measures of constructs that theoretically *should* be related to each other are, in fact, observed to be related to each other (that is, you should be able to show a correspondence or *convergence* between similar constructs) and measures of constructs that theoretically should *not* be related to each other are, in fact, observed to not be related to each other (that is, you should be able to *discriminate* between dissimilar constructs) (Salkind, p. 291-292).

Reliability, on the other hand, is simply whether a test, or whatever one uses as a measurement tool, measures something consistently. It is important to note that validity and reliability are closely linked. If the instrument is not reliable and valid, then the results of the experiment will always be in doubt. It is, however, possible to have a test

that is reliable, but not valid yet you cannot have a valid test without it first being reliable.

The Research Setting and Sample

For this study, the sample was drawn from all Depot personnel, retirees and family members at Anniston Army Depot, Anniston, Alabama over a four month period spanning May-August, 2008. The Depot employs a total of 4,400 personnel, comprising federal, contractor and tenant employees, all of which were invited to participate in the study. Family members of Depot employees were also encouraged to participate. Having received the full endorsement of all senior Depot personnel, employees were invited to participate in the survey in an open letter from the Principal Investigator and the Director of the Directorate of Community and Family Activities.

A total of 1,500 self-completion questionnaires were dispatched to the various Directorates represented on the Depot, who in turn distributed the questionnaires to all employees falling under their immediate supervision. Employees were also presented with an accompanying information letter describing the significance of the research and guaranteeing their anonymity if they decided to participate in the study. Whilst encouraged to complete the questionnaires during shift break, employees were also permitted to complete the questionnaire at home. All completed questionnaires were handed back to the employee's immediate supervisor who then had responsibility for returning the questionnaires to the Directorate of Community and Family Activities. All completed questionnaires were then forwarded to the Principal Investigator for input, analysis and reporting.

The Research Instrument

The methodological framework consisted of a onetime depot wide study of consumer satisfaction with all MWR Depot services. Data comprised 1,500 hard copy questionnaires that were distributed at each of the key service sites on Anniston Army Depot. While the questionnaire predominantly sought to measure consumer satisfaction with the quality of actual service provision; future behavioral intentions and demographic data was also collected as well as information related to actual usage rates/patterns and average speed. While predominantly quantitative in nature, the main study was preceded by a qualitative research element.

Qualitative Research Procedures

A total of five representatives (On-site Director, production and service staff) were approached at Anniston and a series of semi-structured one-on-one interviews were held over a two day period. A series of definitions for the service quality construct were talked through, as well as a range of differing methodologies that might lend themselves to the task of evaluating the service quality construct on-site. However, it was felt that not all scale items were directly relevant to measuring service quality in the particular setting. Agreement was reached on the use of the IPA technique utilizing modified SERVQUAL scale items for the purposes of evaluation. In order to refine the original scales so that they achieved a high degree of validity, a small focus group was organized. The Principal Investigator initially sought unprompted discussion of the attributes that contributed to service quality on the Depot, initially in general, and then specifically in the context of importance and how it relates to service quality. Respondents were then presented with a draft list of revised SERVQUAL scale items and asked to comment on their relevance. In

respect of each item, respondents were asked to develop alternative forms of the scale which they considered to be more useful by means of card sorting. The results from this qualitative stage form the basis of the primary research instrument (the questionnaire) and satisfy the requirement for face validity, i.e. the necessity for the questionnaire to at least measure what it is designed to measure-consumer perceptions of service quality.

Quantitative Research Procedures

Main data collection comprised the administration of the hard copy questionnaires at each key service site over a four month period. Surveys were administered to all consumer groups as appropriate sites have been identified for drop purposes. This should account for any potential peculiarities regarding the normal changes in the business year and population difference. The questionnaire predominantly sought to measure consumers' satisfaction with the quality of MWR service provision. The refined scale items were presented in the form of a combined 32-item self-completion questionnaire, which personnel were asked to complete. Respondents were asked to rate both their perceptions of the attributes listed on a five point Likert scale anchored at (1) strongly disagree and (5) strongly agree. In addition respondents were asked to rate the level of importance attributed to each attribute on a similar scale anchored from low importance (1) to high importance (5). Since a five point scale was used, the principle researcher decided a score of 2.4 or below on the perception scale denotes below average performance, while 2.5 or above denotes above average performance. Similarly, a score of 2.4 or below on the importance scale denotes below average importance, while 2.5 or above denotes above average importance. This was chosen for its simplicity and ease of interpretation.

Survey Administration

4,400 surveys were printed and shipped from Auburn, Alabama directly to Jim Webb, Directorate of Community and Family Activities at the Anniston Army Depot. From this point, Mr. Webb, Directorate of Community and Family Services, forwarded 1,500 of the surveys to the other Directorates at the Depot. From this point, it is unclear how the surveys were distributed. The surveys were distributed over a period of four months and as a result, 348 were returned.

Adequacy of Sample Size

The importance of the sample size, or the number of actual usable surveys collected, is extremely important when it comes to the statistical methods utilized to analyze the data collected. There are two types of errors that can occur, therefore, certain precautions need to be taken in order to minimize their potential effect. The first is known as Type I Error. It is defined as "the probability of rejecting the null hypothesis when actually true, or in simple terms, the chance of the test showing statistical significance when it actually is not present" (Hair, Anderson, Tatham & Black, 1998, p. 10). In order to combat this problem, the researcher sets the alpha level, the acceptable limits for error, usually at .05. The second type of error is called Type II error. This is defined as "the probability of failing to reject the null hypothesis when it is actually false" (Hair, Anderson, Tatham & Black, 1998, p. 11). Mediated by both of Type I and Type II error is the power or the probability of correctly rejecting the null hypothesis when it is should be rejected. Because Type I and Type II errors are inversely related, as Type I error becomes more restrictive (moves closer to zero), the Type II error increases. Reducing Type I errors therefore reduces the power of the statistical test. Complicating the matter is the

fact that power is not only dependant on the alpha level; in fact it is determined by the following three factors:

- **Effect Size**- The probability of achieving statistical significance is based not only on statistical considerations but also on the actual magnitude of the effect of interest, or a difference of means between two groups, or the correlation between variables in the population, termed the effect size. A larger effect size is more likely to be found than a smaller effect and thus to impact the power of the statistical test. Effect sizes are defined in standardized terms for ease of comparison. Mean differences are stated in terms of standard deviations, so that an effect size of .5 indicates that the mean difference is one-half standard deviation. For correlations, the effect size is based on the actual correlation between the variables.
- **Alpha**- As already discussed, as alpha becomes more restrictive, power decreases. This means that as the researcher reduces the chance of finding an incorrect significant effect, the probability of correctly finding an effect also decreases.
- **Sample Size**- At any given alpha level, increased sample size always produces greater power of the statistical test. But increasing sample size can also produce too much power. By increasing the sample size, smaller and smaller effects will be found to be statistically significant, until at very large sample sizes, almost any effect is significant (Hair, Anderson Tatham & Black, 1998; Babbie, 1992).
- **Non-Response Bias-** One important detail to be accounted for in this study is that of a non-response bias. This is the bias that results when respondents differ in meaningful ways from non-respondents. In this particular case, 4,400

questionnaires were distributed to the Directorate of Community and Family Activities at the Anniston Army Depot, who in turn distributed approximately 1,500 questionnaires to the Directorates across the Depot. 348 completed questionnaires were returned, generating a response rate of 23 percent (23%). However, it is unknown exactly how many of these questionnaires were actually distributed and how many were simply not completed by Depot employees. Further, it is unknown the reasons why more questionnaires were not distributed and why employees chose not to complete the questionnaire. Additionally, since this was a one-time study, there is no way to accurately assess if a bias occurred due to the timing of questionnaire distribution.

Summary

In closing, this chapter has provided an in depth overview of the research methodology used in the execution of this project. Also included were an in-depth description of the sample group, tools used to measure different variables, the method in which the surveys were administered, and a description of how the data were collected and organized. The next chapter will contain the actual analysis of the data and the results that were produced from this analysis.

Chapter IV

ANALYSIS OF RESULTS

Introduction

The results of the study are presented in six sections. Section one provides a brief description on the demographic characteristics of the sample. Section two addresses the performance of the research instrument and includes reliability data and validity data. Section three presents an item-based analysis of the key results containing mean values for all importance (I) and performance (P) scales, as well as the I/P difference scores for each item. Section four presents a dimension based analysis of the key components of the service quality construct. Dimensions have been aggregated based upon the results of an exploratory factor analysis as well as previously discussed SERVQUAL RATER categorization. Section five presents this key data in matrix format and section six addresses the key research hypotheses set for the study.

Demographic Sample Characteristics

The principal demographic characteristics of the sample are shown in Table 1. Of the 1,500 questionnaires administered, a total of 348 returns were received, representing a valid response rate of approximately 23 percent (23%).

Table 1 highlights a male dominant work environment with approximately 63 percent of all employees classifying themselves as male. Approximately 31.9 percent of

the workforce falls into the 45 and over age classification. The sample was predominantly drawn from the Federal Employee base with just over 91 percent of respondents classifying themselves as such.

Table 1 - Demographic Profile of Respondents

Frequency of Ages			**Frequency of Gender**		
Value Label	***N***	***%***	**Value Label**	***N***	***%***
18-24	17	4.9	Male	218	62.6
25-34	53	15.2	Female	125	35.9
35-44	79	22.7	Missing	5	1.4
45-54	111	31.9	**Total**	**348**	**100.0**
55 +	84	24.1			
Missing	4	1.1			
Total	**348**	**100.0**			
Frequency of Tenure			**Frequency of Position**		
Value Label	***N***	***%***	**Value Label**	***N***	***%***
< 1 Year	22	6.3	Fed. Employee	318	91.4
2-5 Years	153	44.0	Contractor	4	1.1
6-10 Years	51	14.7	Tenant Employee	15	4.3
11-15 Years	12	3.4	Retired	4	1.1
15 +	105	30.2	Family Member	3	.9
Missing	5	1.4	Other	1	.3
Total	**348**	**100.0**	Missing	3	.9
			Total	**348**	**100.0**

Note: Missing denotes non response on these variables

In terms of usage patterns, Table 2 makes it clear that 33.8 percent of respondents declare that they utilize the MWR service at least once per week, with over 8 percent who report using these facilities daily. Eighty percent (80%) of respondents declare that they make use of the MWR services, a majority of which, (59%) declare they spend one hour or less using MWR services. Just over 17 percent of respondents report that they never make use of these services. Of those that do make use of MWR services, just under 25 percent (24.7%) declare they use these services in the early morning while, close behind, 24 percent state they use the MWR services in the early evening. A majority of

respondents, just over 47 percent (47%) declare that they learned about the MWR service provisions from a fellow worker, while 31 percent declare that they learned of the MWR services during New Employee Orientation. Twelve respondents (3.4%) declared that they did not know of MWR's existence. In terms of advertisements regarding MWR and its available services, 12 percent of respondents declared that they had read an advertisement, while 4.3 percent of respondents declared that they had just happened upon the MWR services offered.

Table 2 – Usage Patterns of Respondents

Frequency of Patronage (USE)			**Time per Visit**		
Value Label	***N***	***%***	**Value Label**	***N***	***%***
Weekly	114	32.8	< 1 Hour	205	58.9
1-3 PW	102	29.3	2-3 Hours	97	27.9
3-5 PW	31	8.9	4-5 Hours	2	.6
Daily	30	8.6	6+ Hours	6	1.7
Never	60	17.2	Missing	38	10.9
Missing	11	3.2	**Total**	**348**	**100.0**
Total	**348**	**100.0**			
Usage Pattern			**Awareness**		
Value Label	***N***	***%***	**Value Label**	***N***	***%***
Early AM	86	24.7	Orientation	107	30.7
Mid AM	29	8.3	Word Of Mouth	165	47.4
Lunch	40	11.5	Advertisement	41	11.8
Late Afternoon	77	22.1	Accidental	15	4.3
Early Evening	85	24.4	Not Aware	12	3.4
Other	10	2.9	Missing	8	2.3
Missing	21	6.0			
Total	**348**	**100.0**			

Note: Missing denotes non response on these variables

Table 3 highlights the frequencies of the programs chosen for evaluation. The Physical Fitness Center was chosen the majority of the time with 36% with the second most popular being the Java Café with 13 %. However, the Restricted Area Fitness

Center scored quite low with only .9% while the ITR Office was evaluated the least with only two responses (.6 %).

Table 3 – Demographics of MWR Programs

Program Frequency Name	***N***	***%***
Physical Fitness Center	125	35.9
Cardio Center	12	3.4
Restricted Area Fitness Center	3	.9
Skills Development Center	16	4.6
Cone Reservoir	17	4.6
Lakes at Jones Knob	9	2.6
Hunting/Fishing Program	26	7.5
220 Club	24	6.9
ITR Office	2	.6
Java Café	45	12.9
Community Activity Center	11	3.2
DeSoto Entertainment Center	16	4.6
Bingo	4	1.1
Missing	3	10.9
Total	**348**	**100.0**

Respondents were also questioned regarding their future behavioral intentions in regards to MWR services and whether they would be happy to continue utilizing the services and or recommending them to others. Additionally, respondents were questioned on the issue of competitive quality and whether services provided "adequate amenities and service for the price" they paid. Respondents were also quizzed on their overall satisfaction with the services provided by MWR, Price Value delivery and their motivation for utilizing the services offered. Table 4 makes it clear that in relation to "Likelihood to continue to utilize MWR Services"; 71 percent of respondents were either "Likely" or "Highly Likely" to continue to utilize the services offered. This corresponds well with recommendation intention (Likelihood to recommend the services to others)

with 73 percent of respondents declaring that they would be “Likely” or “Highly Likely” to recommend both services to others.

Table 4 – Behavioral Intention of Respondents

Frequency of Satisfaction with MWR			**Frequency of Continued Patronage**		
Value Label	***N***	***%***	**Value Label**	***N***	***%***
Highly Dissatisfied	4	1.1	Highly Unlikely	20	5.7
Dissatisfied	25	7.2	Unlikely	17	4.9
Neither	84	24.1	Not Sure	60	17.2
Satisfied	98	28.2	Likely	74	21.3
Highly Satisfied	134	38.5	Highly Likely	173	49.7
Missing	3	.9	Missing	4	1.1
Total	**348**	**100.0**	**Total**	**348**	**100.0**
Frequency of Recommendation			**Frequency of Perceived Directorate Commit.**		
Value Label	***N***	***%***	**Value Label**	***N***	***%***
Highly Unlikely	17	4.9	Very Uncommitted	8	2.3
Unlikely	12	3.4	Uncommitted	41	11.8
Not Sure	60	17.2	Unsure	69	19.8
Likely	78	22.4	Committed	8	24.4
Highly Likely	175	50.3	Very Committed	140	40.2
Missing	6	1.7	Missing	5	1.4
Total	**348**	**100.0**	**Total**	**348**	**100.0**
Frequency of Competitive Quality			**Frequency of Price Value**		
Value Label	***N***	***%***	**Value Label**	***N***	***%***
Very Uncompetitive	11	3.2	Highly Dissatisfied	10	2.9
Uncompetitive	44	12.6	Dissatisfied	24	6.9
Unsure	105	30.2	Neither	81	23.3
Competitive	96	27.6	Satisfied	87	25.0
Very Competitive	88	25.3	Highly Satisfied	14	40.2
Missing	4	1.1	Missing	6	1.7
Total	**348**	**100.0**	**Total**	**348**	**100.0**
Frequency of Motivation for Use					
Value Label	***N***	***%***			
Escape	58	16.7			
Stress Reduction	73	21.0			
Health Related	112	32.2			
Social Involvement	46	13.2			
Self Esteem	31	8.9			
Missing	28	8.0			
Total	**348**	**100.0**			

Note: Missing denotes non response on these variables

Overall satisfaction with MWR services is high with 67 percent reporting they are either “Satisfied” or “Highly Satisfied” with only 8 percent reporting dissatisfaction. In regard to price, just over 65 percent of all respondents are either “Satisfied” or “Highly Satisfied” with MWR services and feel that the services offered are a good value for the price paid, with only 10 percent of all respondents declaring they either “Disagreed” or “Strongly Disagreed” with this price/value proposition. This bodes well with respondents’ view of MWR’s competitive quality as compared to other local services with 53 percent of respondents reporting that MWR services are “Competitive” or “Highly Competitive”. In terms of the Directorate’s commitment, 64.4percent of respondents feel the Directorate is “Committed” or “Very Committed” to providing adequate MWR services. In terms of motivation, 32 percent of respondents declared they used MWR services for health related issues followed by stress reduction (21 %) which is somewhat interconnected with health. Only 9 percent reported using them to boost self esteem.

Performance of the Research Instrument – Reliability and Validity

Reliability evaluation of a measurement procedure consists of estimating how much of the variation in scores of different variables is due to chance or random error and according to Newton, Robinson, Kahn, Gelbier, and Goibbons (1987, p. 106), such measures are necessary in order to ensure the same results will be consistently reproduced in subsequent administrations of the instrument. Cronbach’s Coefficient alpha is used to estimate the degree of reliability with estimates ranging from 0 to 1.0. The higher the coefficient (closer to 1.0) the stronger the linear relationship of the items being correlated and the higher the internal consistency.

Overall the instrument performed well in terms of reliability. Overall reliabilities were $\alpha = 0.98$ (I) and 0.99 (P) respectively for the importance (I) and performance (P) scales. Overall reliability for the importance-performance difference scores was also high at $\alpha = 0.94$. These reliability measures clearly exceed the usual recommendation of $\alpha = 0.70$ for establishing internal consistency of the scale (Cronbach, 1951).

Validity, on the other hand, addresses the question of how close a measure really comes to measuring the concept that it was designed to measure. In the context of the present study, the question is best posed as follows: How do we know that our measures of service quality and satisfaction are really addressing each of these constructs and not something else?

In an attempt to answer these key questions, this section presents an overview of the data available to assess the measurement instrument's validity. While there are many different types of validity, each addressing different aspects of the validity issue, those that will be reported here include both content or face validity and construct validity.

Content Validity

As stated previously, the basic conceptual criterion a measurement scale must meet is face validity or content validity. That is, that the measure appears to measure what it purports to measure. This was an essentially qualitative task and was accomplished in August, 2006, during the focus group phase of the research, where the key informants were brought together to develop, discuss and refine the instrument to be used. All discussions were recorded, analyzed and transcribed for accuracy. Focus group members were first asked to speak about their perceptions of MWR and then to highlight

those factors that contributed to and/or detracted from their overall experiences with MWR. Significantly, a number of important factors were identified:

- Firstly, all respondents felt strongly that MWR was a significant part of life at the Anniston Army Depot. For many, MWR was viewed as not only a job but as a way to do what they enjoy, and enjoy what they do. These employees felt it was important to provide these services for the families and, in general, as a way to improve the overall well-being of the entire Depot.
- Secondly, they felt that MWR was performing well, but could be doing much better. During this time, a number of areas were discussed that these employees felt deserved more attention and improvements. Included were marketing, access to facilities, parking, programming and the need for more employees since the current employees feel maxed-out and spread too thin.
- Thirdly, the participants discussed the term ‘quality’ and what it means to them in terms of MWR. They reported that quality is "giving a service to the customer well beyond his or her expectation." And is achieved by knowing what the customer wants and by supplying it when they want it. Basically, just ensuring they deliver.

Upon conclusion of this session, a second focus group was conducted which utilized the information gathered in the first focus group through a technique known as card sorting. Participants were given 33 cards, each with a variable dimension written upon them, and were asked to sort these into like groups and provide a title for each grouping. Upon conclusion of their discussion, six identifiable groups were compiled:

- Physical Qualities of the Facility
- Safety/Security of the Facilities
- Quality Control
- Staff Standards
- Individualized Staff Approach
- Problem Solving

One variable, however, was excluded from all groups. Once the focus groups were concluded, the questionnaire was created.

Construct Validity

The instrument was also assessed in terms of construct validity. Cohen, Swerdlik and Smith (1992, p.177) state that something is valid if it is sound, meaningful, or well grounded on principles or evidence. Taken in the context of psychological assessment, the term is used in conjunction with the meaningfulness of a test score. In other words, the word validity, as applied to a test refers to a judgment concerning how well the test does in fact measure what it purports to measure. Construct validity was addressed in terms of both convergence and the research instrument's ability to discriminate between the underlying dimensionality of the service quality construct.

Convergence was investigated by calculating the mean score for each of the 32 scale items and correlating (Pearson's product moment correlation) these with the mean score from a two item measure of future behavioral intention which was also included in the instrument. This form of examination explores the question: Do like measures perform similarly and as expected? (Rubin, 1990). The test used for this procedure was Pearson's product moment correlation. This test was used to give an index of the

direction and strength of linear association between the two variables. In short, the closer the correlation efficient (r) is to 1 or –1, the stronger the association between the variables. A correlation of 0.61 was found which, while low, was nonetheless significant at the 1% level ($p<0.01$).

Analysis next turned to the issue of discriminant validity. This task was facilitated via an exploratory factor analysis using the principal components extraction technique. The analysis made use of the VARIMAX factor rotation procedure in SPSS version 16. A component matrix was initially generated to ensure that the analyzed variables had reasonable correlations (greater than or equal to 0.4) with other variables. Unrotated and rotated component matrices were inspected and variables that did not correlate or correlated weakly with others were excluded (De Vaus, 1996). The result of the corresponding KMO of "sampling adequacy" was 0.965 and Bartlett's test for sphericity was 14354.898, which is considered a high Chi-Square, but nonetheless significant at the level of 1 percent (sig.=0.001). The results of these tests rendered the data factorable and consequently the factor analysis was generated.

Table 5 – Exploratory Factor Analysis

Variable	Factor 1 SERVICE	Factor 2 FACILITY
Compensation for problems	.842	
Sincerity of approach when things go wrong	.841	
Willingness to apologize	.838	
Sincerity in approach to problem solving	.832	
Responsiveness to new ideas	.828	
Responsiveness of service staff	.825	
Sincerity of service staff	.818	
Staff communication skills	.810	
Staff problem solving ability	.809	
Consideration of inconvenience	.808	
Personalized service	.806	
Staff willingness to help	.793	
Responsiveness to individual needs	.791	
Employee product knowledge	.772	
Delivery on service promise	.764	
Staffing levels	.760	
Flexibility	.756	
Error free service delivery	.753	
Staff dress code	.752	
Courtesy of service staff	.731	
The behavior of other customers	.714	
Personal safety and security	.672	
Wait times	.646	
Noise levels	.640	
Access to facilities		.833
The location of facilities		.820
Toilets and changing facilities		.783
Parking availability		.773
Physical condition of facilities		.743
Cleanliness of facilities		.736
Interior décor and design		.714
Hours of operation		.698
Eigenvalue	23.932	1.547
% of variation	74.78%	4.83%
Co-efficient alpha	0.98	0.94

Table 5 illustrates strong factor loadings (item to total correlations) along two dimensions with coefficient alpha scores ranging from 0.94 (FACILITY) dimension to 0.98 for the (SERVICE) dimension, which combined accounted for approximately 79% of the explained variance. From the analysis, extracted component one (SERVICE) is reflective of what might best be described as the softer and more service oriented aspect of the MWR experience. Component two (FACILITY) is reflective of the more tangible and physically oriented aspects of the MWR experience. These results confirm the view expressed within hypothesis H1 that the five factor structure proposed for the original SERVQUAL technique would not be held up.

The results did point to a degree of cross-loading across four variables (4, 5, 6, 8) but the degree of difference in correlation was significantly weighted in all cases to permit their inclusion in dimension two (FACILITY). There is also clear theoretical support for their inclusion in this dimension given the very tangible and/or facility oriented nature of each variable.

Item Based Analysis of Key Results

The next stage of the analysis was to examine the sample responses across the 32 individual attributes to assess consumer perceptions of service quality and the relative importance assigned by consumers to each. For each respondent, an Importance – Performance difference score was also calculated. This information is presented in Table 6, where mean scores for all respondents are shown for each of the service quality attributes. It should be pointed out at this stage that in the interests of reliability, only those respondents completing both the importance and performance scales have been included in this section of the analysis.

In addition, a series of paired-samples t-tests were run to evaluate where mean performance scores differed significantly from mean importance scores. This was deemed necessary in order to highlight areas of actual concern from the consumer's point of view. The idea being that when respondents' importance scores are shown to significantly differ from corresponding performance scores for a particular variable this is reflective of the existence of a quality performance gap. This in turn may be used to target specific quality improvement efforts. Similarly, where performance scores are shown not to significantly differ from corresponding importance scores for a particular quality variable this may also serve to highlight exceptional performance and/or misdirected quality effort.

Table 6 – Analysis of Individual I/P Variable Scores

Quality Attribute	Mean Importance	Mean Performance	P-I Difference	t value	Sig. (2 tailed)
1. Toilets and Changing Facilities are clean & appealing	4.22	3.82	-0.40	-5.28	0.001
2. Location of Facilities	4.26	3.89	-0.37	-5.48	0.001
3. Parking Availability	4.20	3.51	-0.69	-8.15	0.001
4. Interior Décor and Design	3.54	3.77	-0.23	3.52	0.001
5. Physical Condition/Appeal of Facilities	4.02	3.92	-0.10	-1.18	0.001
6. Cleanliness and Upkeep of Facilities	4.35	3.96	-0.39	-6.42	0.001
7. Access to Facilities	4.26	3.88	-0.38	-5.44	0.001
8. Hours of Operation	4.20	3.90	-0.30	-4.30	0.001
9. Sincerity of Staff Approach	4.13	3.91	-0.22	-2.96	0.001
10. Responsiveness to Individual Needs	4.16	3.94	-0.22	-2.86	0.001
11. Individual Attention Afforded to Me/Personalized Service	4.04	3.85	-0.19	-2.37	0.001
12. Responsiveness to Individual Needs	4.06	3.86	-0.20	-2.59	0.001
13. Courtesy of Service Staff	4.23	3.99	-0.24	-3.52	0.001
14. Flexibility of Staff	4.02	3.87	-0.15	-2.14	0.001
15. Staffing Levels	3.89	3.72	-0.17	-1.94	0.001
16. Willingness of Staff to Help/Answer Questions	4.11	3.90	-0.21	-3.08	0.001
17. Wait Times/Line for Service	4.13	3.83	-0.30	-4.00	0.001
18. Delivery on Service Promise	4.11	3.86	-0.25	-3.56	0.001
19. Staff Dress Code	3.63	3.92	-0.29	4.48	0.001
20. Error Free Service Delivery	3.85	3.85	-0.00	.425	0.001
21. Staff Communication Skills	4.06	3.90	-0.16	-2.11	0.001
22. Employee Product Knowledge	4.06	3.91	-0.15	-1.87	0.001
23. Noise Level in Facility	**3.99**	**4.02**	**0.03**	**0.31**	**0.001**
24. Behavior of Other Customers	4.09	3.93	-0.16	-2.23	0.001
25. Personal Safety and Security	4.25	4.04	-0.21	-2.91	0.001
26. Staff Problem Solving Abilities	4.07	3.90	-0.17	-1.66	0.001
27. Compensation for Problems Encountered	3.99	3.78	-0.21	-2.32	0.001
28. Responsiveness to New Ideas	4.12	3.79	-0.42	-3.63	0.001
29. Sincerity in Approach to Problem Solving	4.10	3.88	-0.22	-2.11	0.001
30. Willingness to Apologize/Accept Blame When Problems Occur	3.95	3.73	-0.22	-2.27	0.001
31. Consideration of Inconvenience	3.97	3.70	-0.27	-3.02	0.001
32. Sincerity of Approach When Things Go Wrong	4.13	3.76	-0.37	-4.66	0.001

In the interests of ease of interpretation, a score of 2.4 or below on the perception scale denotes below average performance, while 2.5 or above denotes above average performance. Similarly, a score of 2.4 or below on the importance scale denotes below average importance, while 2.5 or above denotes above average importance. Table 6 highlights that all variables recorded above average performance with variable performance scores ranging from m=3.51 (Variable 3 – "Parking Availability") to m=4.04 (Variable 25 – "Personal Safety and Security"). Corresponding importance scores, however, point to a degree of underachievement and range from m=3.54 (Variable 4 – "Interior Décor and Design") to m=4.35 (Variable 6 - "Cleanliness and Upkeep of Facilities").

On a more negative note, Table 6 displays negative differentials for 31 attributes. A series of paired samples *t* tests reveals these differences to be significant in all cases at the 1% level ($p<0.05$). This may be indicative of the fact that respondent perceptions of the actual service received are at a level lower than expected. In other words, while respondents consider each of these items to be of significant importance in their overall evaluation of the service experience, the facilities surveyed are not performing at a level reflective of the importance assigned.

Dimension Based Analysis of the Results-Adapted SERVQUAL

Analysis next turned to the service quality dimensions (SERVICE and FACILITY) uncovered by the preceding factor analysis. The variables included in each dimension were aggregated and tested for reliability using Cronbach's alpha. A short description of each dimension, as well as the scale items that actually comprise each is provided in Table 7 along with the relative reliability ratings for each.

Table 7 – Reliability of Aggregated QUALITY Dimensions

QUALITY Dimension	Scale Items Included	Importance Attributes [Cronbach's Alpha]	Satisfaction Attributes [Cronbach's Alpha]
SERVICE	9 – 32	.97	.98
FACILITY	1 - 8	.90	.94

Table 7 makes it clear that both dimensions satisfy the recommended alpha level of 0.70 for reliability. This is a strong indicator that each of the dimensions listed is a reliable indicator of that which it is purported to measure.

Table 8 – Importance-Performance Means for SERVQUAL Dimensions

QUALITY Dimension	Mean Importance	Mean Performance	Performance minus Importance	Sig. (2 tailed)
SERVICE	4.04	3.87	-.17	0.004
FACILITY	4.15	3.82	-.33	0.001

The relative mean importance and performance values were then calculated for each dimension based upon an aggregation of the variables pertaining to each (Table 8). I/P difference scores were then calculated for each dimension and a series of paired sample *t* tests conducted to attest to the degree of significant difference between each. As with the previous analysis of individual service quality attributes (Table 6), results reveal that the mean importance/performance scores for each dimension are again above average (m=2.50). FACILITY received the highest importance rating (m=4.15), while

SERVICE received the highest performance rating (m=3.87). Any corresponding improvement effort must therefore be prioritized in this FACILITY area. As with the preceding item based analysis, the degree of relative importance assigned, exceeds the corresponding performance value for each dimension and is significant in all cases ($p<0.05$).

Analysis next turned to the dimensions defined in the original SERVQUAL scale. These five dimensions, referred to by the acronym RATER (Reliability, Assurance, Tangibles, Empathy and Responsiveness) were formed from the original 32-item scale and categorized into the RATER dimensions based upon their relative fit and the feedback received in the initial qualitative stages of the study. A further dimension titled PROBLEM SOLVING was also created based upon the results of the preceding qualitative research process.

Table 9 – Reliability of Aggregated SERVQUAL Dimensions

SERVQUAL Dimension	Scale Items Included	Importance Attributes [Cronbach's Alpha]	Satisfaction Attributes [Cronbach's Alpha]
Reliability *(Dependable, accurate performance)*	18,20,21,22	.93	.95
Assurance *(Competence, courtesy, credibility & security)*	12,23,24,25	.92	.85
Tangibles *(Appearance of physical elements)*	1,2,3,4,5,6,7,19	.88	.94
Empathy *(Easy access, good communications & customer understanding)*	9,11,12,14	.92	.95
Responsiveness *(Promptness & helpfulness)*	8,10,15,16,17,26,28	.92	.95
Problem Solving *(Ability to solve problems in a timely fashion)*	27,29,30,31,32	.94	.96

Once again the variables included in each category were aggregated and tested for reliability using Cronbach's alpha. A short description of each dimension, as well as the scale items that actually comprise each is provided in Table 9 along with the relative reliability ratings for each.

It can be seen that all of the RATER dimensions satisfy the recommended alpha level of 0.70 for reliability. This is a strong indicator that each of the dimensions listed is a reliable indicator of that which it is purported to measure.

Table 10 – Importance-Performance Means for SERVQUAL Dimensions

SERVQUAL Dimension	Mean Importance	Mean Performance	Performance minus Importance	Sig. (2 tailed)
Reliability	4.02	3.88	-.14	0.001
Assurance	4.12	3.99	-.13	0.001
Tangibles	4.08	3.83	-.25	0.001
Empathy	4.08	3.86	-.22	0.001
Responsiveness	4.11	3.85	-.26	0.001
Problem Solving	4.04	3.78	-.26	0.001

The relative mean importance and performance values were then calculated for each RATER dimension based upon an aggregation of the variables pertaining to each (Table 7). I/P difference scores were then calculated for each dimension and a series of paired sample *t* tests conducted to attest to the degree of significant difference between each. As with the previous analysis of individual service quality attributes (Table 6), results reveal that the mean importance/performance scores for each dimension are again above average (m=2.50). Assurance received the highest importance and performance ratings (m=4.12 & m=3.99 respectively), while Problem Solving recorded the lowest I/P ratings (m=4.04 & m=3.78). Any corresponding improvement effort must therefore be prioritized in this area. As with the preceding item based analysis, the degree of relative importance assigned, exceeds the corresponding performance value for each dimension and is significant in all cases ($p<0.001$). Dimension based importance ratings ranged from m=4.02 for Reliability through to m=4.12 for Assurance.

Importance-Performance Matrix

The next stage in the analysis examined the relative positioning of the individual service quality dimensions in relation to overall mean performance and importance for operators. One of the advantages of using a weighted performance measure is that attributes can be plotted graphically on a matrix and this can assist in quick and efficient interpretation of the results.

Figure 10 – Importance - Performance Matrix of QUALITY Dimensions

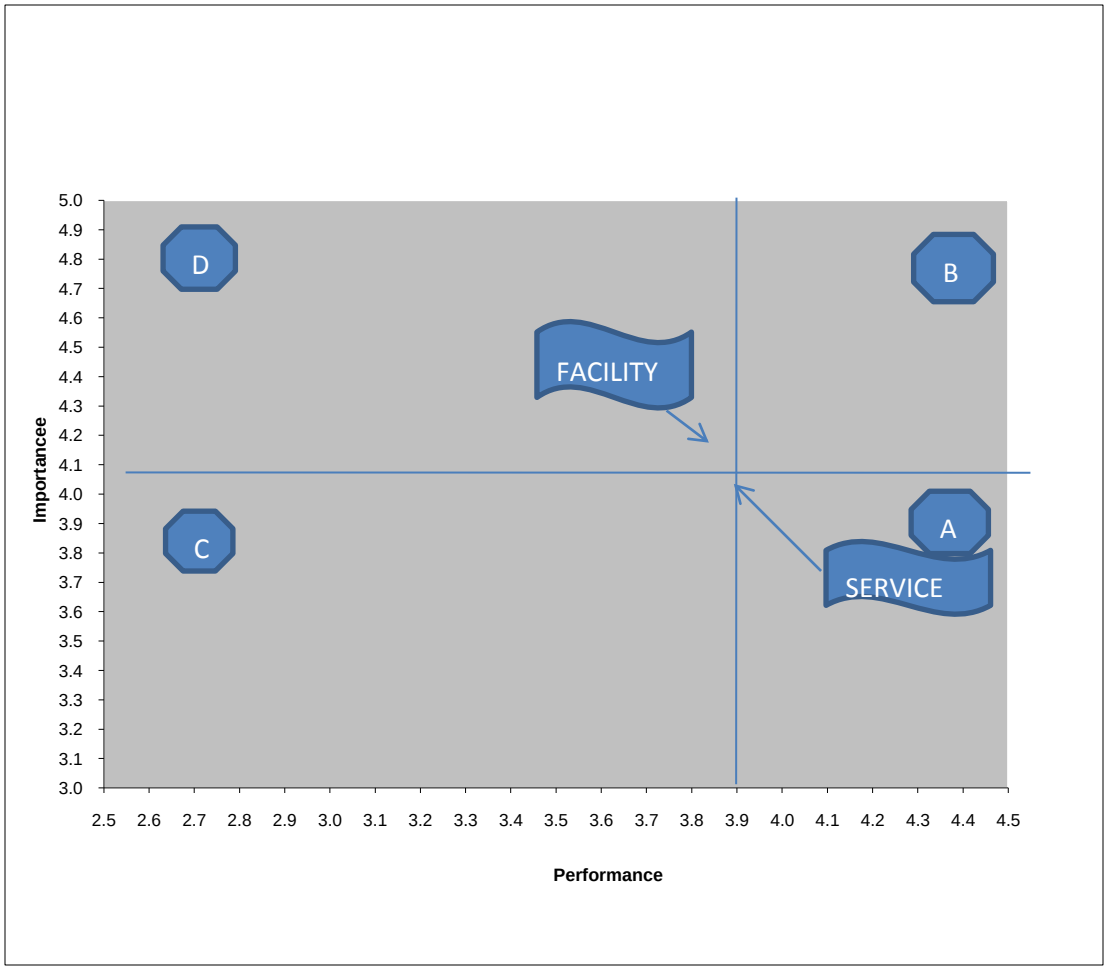


Figure 9 highlights the relative positioning of dimensions in matrix format. The matrix is represented by the importance values on the vertical axis, while performance values are on the horizontal axis. Each of the aggregated dimensions (SERVICE and FACILITY) is shown on the matrix with a corresponding segment interpretation provided below. When presented in matrix format (Figure 10) the results present operators with a number of strategic alternatives, two of which are of significance in this instance:

1. **Quadrant A** indicates a misuse of the operator's resources. While judged to be performing well above average in relation to the provision of this particular dimension, customers in their assessment of the overall experience have deemed these attributes relatively important (below average importance). Typically, it is unlikely therefore that any further investment and/or improvement in this area will lead to a greater perception of quality on the part of the consumer. While Figure 10 indicates that the SERVICE dimension falls into this category it is actually right on the borderline with respect to average performance and therefore does not fall into this catchment.
2. **Quadrant B** reflects a situation where the operator is perceived to be performing above average in relation to the delivery of those service attributes deemed most important by customers. Existing efforts should be maintained with respect to each of the four dimensions falling into this quadrant.
3. **Quadrant C** reflects the fact that certain aspects of the experience are not performing to their full service potential. When viewed in the context of the corresponding importance weighting, however, any pertaining improvement effort would have to be questioned. It should be clarified at this stage that the aggregate importance rating for

this variable remains high and regardless of rank relative to other dimensions, targeted improvement should continue to be directed at this more logistical element of the service delivery system.

4. **Quadrant D** is where the greatest improvement effort is required. Attributes that fall into this category are deemed to be of above average importance to customers in their overall evaluation of the service experience, yet are under-performing in the customer's eyes (below average performance). It should be a priority that improvement efforts are focused in this area. Figure 10 indicates that the FACILITY dimension clearly falls into this category for MWR.

Analysis of Research Hypotheses

There is general agreement within the literature that identification of service quality dimensions aids an understanding of customer needs and wants. Yet, while the search for a reliable method of measuring service quality has produced extensive literature, there has been little consensus on a methodology, which is of general applicability in all situations. In the absence of any other objective measure, disconfirmation models came to dominate the literature on service quality from the early 1980s. Pre-eminent among recent studies has been the work of Parasuraman, Zeithaml and Berry (1985) and the development of their SERVQUAL instrument. Their research has concentrated on the belief that service quality is measurable but only in the eyes of the consumer. They take the view that service is deemed to be of high quality when customers' expectations are confirmed by subsequent service delivery. Their model has been challenged on a number of grounds, not least with respect to the replication of the five factor (RATER) structure proposed in the original research; suggesting little

generalizability of these emerged dimensions. Subsequent studies (Babakus and Boller, 1992; Carman, 1990) have demonstrated that the number of dimensions can range from one, for example Cronin and Taylor (1992) to eight, for example, Carman (1990). Even Parasuraman, Zeithaml and Berry (1994) recognizes the overlap of responsiveness, assurance and empathy, and the possible blending of these three dimensions into one. All of which provides further evidence of the complexity of the service quality construct and the fact that it cannot be defined in any one way for all service encounters.

Given that the actual survey utilized for this study required significant modification pre-administration, not least with respect to the addition of 10 additional variables, it is not surprising that the actual measure should not factor out to represent the five dimensions originally proposed for SERVQUAL. The following hypothesis is thus proposed:

- H1: The five factor structure proposed for the SERVQUAL instrument will not be held up when applied to a unique setting such as a military base.

Results of a previously shared exploratory factor analysis support the view expressed in the H1 hypothesis with a VARIMAX factor rotation procedure in SPSS uncovering two factors (SERVICE and FACILITY) accounting for some 79% of the explained variance.

Previous reference has been made to the concepts of customer satisfaction and customer perceived service quality. Indeed a review of the literature reveals that the terms are quite often used interchangeably, which has led to confusion regarding both terms. While the two concepts are related and appear to be merged, there are still gaps in the understanding of the two constructs, their relationship to each other and their antecedents

and consequences (Gwynne, Devlin and Ennew, 1998). Oliver (1980, p.461) takes the view that satisfaction is "the emotional reaction following a disconfirmation experience". Getty and Thompson (1994, p.4) define it as a "summary psychological state experienced by the consumer when confirmed or disconfirmed expectations exist with respect to a specific service transaction or experience". In fact, the most commonly used representation of customer satisfaction is the disconfirmation approach (Ramaswamy, 1996), where satisfaction is related to the variation between a customer's pre-purchase expectations and his or her post-purchase perceptions of the actual service performance.

Perceived quality, on the other hand, may be viewed as a global attitudinal judgment associated with the superiority of the service experience over time (Getty and Thompson, 1994). It is perceived as being much more dynamic in nature and less transaction specific (Parasuraman, Zeithaml and Berry, 1988). In other words, it has attitudinal properties and acts as a global, value judgment. According to Lovelock, Patterson and Walker (1998, p.126), the important distinction is that " … satisfaction is experience-dependent - you must experience the service to feel a degree of satisfaction/dissatisfaction. Perceived service quality on the other hand is not experience-dependent … perceived service quality is formed over multiple service encounters". As such it is hypothesized:

- H2: The overall quality of the service experience received at MWR will be positively correlated with respondents overall satisfaction and subsequent intent to revisit and/or recommend the MWR services and facilities to others.

Additionally, there has been considerable debate concerning the nature of the relationship between both constructs. While many researchers present strong evidence to suggest that satisfaction may be a vital antecedent of service quality (Oliver, 1980; Bitner, 1990), more recent research suggests that service quality is a vital antecedent to customer satisfaction (Oliver, 1993; Taylor and Baker, 1994; Spreng and Mackoy, 1996; Yu and Dean, 2001). This view is supported by Gotlieb et al. (1994) who suggest that perceived service quality affects satisfaction and behavioral intentions are affected by satisfaction. This view suggests that that while service quality influences the consumer future behavioral intention, it does so through the mediating role of satisfaction (Wong, 2004).

- H3: That while an individual's perception of service quality will be positively related to their future behavioral intention, there will be a stronger correlation between their perceptions of service quality and overall satisfaction, which in turn will be positively correlated with future behavioral intention.

Both hypotheses were investigated by calculating the mean quality scores for each of the 32 scale items and correlating (Pearson's product moment correlation) these with both a single item measure of overall satisfaction and a mean future behavioral intention (FBI) score also gathered as part of the research. Results of this test (Table 11) show a significant positive correlation with future behavioral intention (0.334; Sig. < 0.001) but a much stronger positive correlation with overall satisfaction (0.459; Sig. < 0.001). Results confirm the view expressed within Hypothesis H2 and the mediating role of satisfaction as expressed within hypothesis H3.

Table 11 – Correlation Index of Mean Quality Scores/Overall Satisfaction and Future Behavioral Intention

		Mean Quality Score	Overall Satisfaction Score	Mean FBI Score
Mean Quality Score	**Pearson Correlation**	1.00	.459**	.334**
	Sig. (2-tailed)		.001	.001
	N	332	331	332
Overall Satisfaction Score	**Pearson Correlation**	.459**	1.00	.566**
	Sig. (2-tailed)	.001		.001
	N	331	345	345
Mean FBI Score	**Pearson Correlation**	.334**	.566	1.00
	Sig. (2-tailed)	.001	.001	
	N	332	345	346

- **** Correlation is significant at the 0.01 level (2-tailed).**

Summary

The data highlights a rather positive picture of MWR quality service provision at Anniston Army Depot and should serve to direct continuing improvement efforts by the Directorate. While performance values in most cases fall below the level of ascribed importance for each variable, they are nonetheless well above average in all cases and while the gap recorded is statistically significant in all cases, the Directorate should be commended for its efforts.

Chapter V

DISCUSSION AND CONCLUSIONS

Research Overview

The overriding goal of this study was to develop and operationalize a measure of consumer satisfaction with Morale, Welfare and Recreation (MWR) service provision at the Anniston Army Depot as well as identify those elements of real importance to personnel when it comes to defining the service quality construct on the Depot. The project investigated the conceptualization and measurement of service quality, through an application of the importance-performance analysis (IPA) technique based on modified SERVQUAL scales. More specifically, and in direct recognition of the importance given to this issue by the United States Military, the research sought to develop and operationalize an ongoing consumer satisfaction measure of the Directorate of Community and Family Activities Morale Welfare and Recreation (MWR) service provision at AAD and addressed the question: What is the relationship between customer satisfaction with MWR service provision at Anniston Army Depot and their intent to consume these services in the future?

As highlighted earlier in the methodology section, the research associated with the project involved both quantitative and qualitative research. The qualitative research consisted of two focus groups conducted with a small group of Depot personnel. The

results of which were used to establish a basic understanding of what was important to consumers during their experience with MWR service provision, and to streamline the actual survey in an effort to measure those important factors. The quantitative research consisted of a one time, Depot wide study. The sample group was drawn from all Depot personnel, retirees and family members at Anniston Army Depot, Anniston, Alabama over a twelve week period spanning May-July, 2008. The Depot employs a total of 4,400 personnel, comprising federal, contractor and tenant employees, all of which were invited to participate in the study. Family members of Depot employees were also encouraged to participate. Of the 4,400 questionnaires sent to the Anniston Army Depot, only 348 were returned to the primary researcher. The IPA technique utilizing modified SERVQUAL scale items was used for the purpose of evaluation.

This chapter will provide a brief restatement of each hypothesis and the findings related to each. Following this section a discussion on the performance of the actual measurement as well as the implications for the academic communities will be conducted. This will be followed by a summary of the major contributions of the study, along with the limitations of the study and recommendations for future research.

Overview of the Results

The research has reviewed the theoretical bases underlying the measurement of consumers' perceptions of service quality. Covered were a number of models used to describe dimensions of service quality, one of the most widely used being the SERVQUAL scale based on a five factor structure called RATER (Reliability, Assurance, Tangibles, Empathy, and Responsiveness) developed by Parasuraman, Zeithaml and Berry (1985). Not only is it one of the most widely used, it is also one of

the most heavily critiqued instruments used by researchers today. Because of its wide spread acceptance by researchers, it was used as a basic frame from which to start the survey used in this project. One of the main critiques of this tool has been the inability to replicate its proposed 5 factor structure, in multiple service settings. Because of this and the unique service setting that was used for this project the first hypothesis was:

- H1: The five factor structure proposed for the SERVQUAL instrument will not be held up when applied to a unique setting such as a military base.

To test this hypothesis, an exploratory factor analysis was conducted. Results of a previously shared exploratory factor analysis support the view expressed in the H1 hypothesis. Based on the results, the five factor structure for the SERVQUAL scale was not held up. Instead, the results point to a two factor structure, similar to the ideas proposed by Cronin & Taylor (1992), Gummesson (1993) and Gronroos (1983).

It would appear that Parasuraman, Zeithamal and Berry have overcomplicated the SERVQUAL scale by adding three extra factors. This research project has shown that, in the context of the Anniston Army Depot's MWR program, the only two factors that seem to inform on the perception of service quality and satisfaction are the 'service' dimension and 'tangibles' to get a clear understanding of what is going on. Buttle (2004), notes that SERVQUAL's five dimensions are not universals. He states, "The number of dimensions comprising service quality is contextualized; items do not always load on the factors which one would a priori expect; and there is a high degree of intercorrelation between the five RATER dimensions" (p. 10). Obviously this is a major flaw with SERVQUAL and has been supported by the results of this research. Not only is the issue of

SERVQUAL's five factors a problem, but there is also question as to the antecedents of service quality and satisfaction.

As previously reviewed in this project, the connection between customer satisfaction and perceived service quality has been debated, but both sides agree that both of these elements are closely related. While some would argue that they are interchangeable, resent research has revealed that they are indeed separate variables and thus will exhibit separate amounts of correlation to other factors, such as future behavioral intentions. As such, hypothesis two and three were formed to test just that:

- H2: The overall quality of the service experience received at MWR will be positively correlated with respondents overall satisfaction and subsequent intent to revisit and/or recommend the MWR services and facilities to others.

Researchers have yet to come to a conclusion on the antecedents of service quality and satisfaction; however, this research project points to the fact that service quality is an antecedent to satisfaction. Lovelock, Patterson and Walker (1998) pointed to the fact that satisfaction is experience-dependent, meaning that you must experience service to feel a degree of satisfaction or dissatisfaction while perceived service quality, on the other hand, is not experience-dependent. As such, it can be posited that excellent service will most likely lead to satisfied customers who will, with luck, be return visitors who will also incite others to use/reuse the services. This view is supported by Gotliev et al. (1994) who suggests that perceived service quality affects satisfaction and behavioral intentions are affected by satisfaction. This view suggests that while service quality influences the consumer future behavioral intentions, it does go through the mediating role of satisfaction (Wong, 2004).

Hypothesis three states:

- H3: That while an individual's perception of service quality will be positively related to their future behavioral intention, there will be a stronger correlation between their perceptions of service quality and overall satisfaction, which in turn will be positively correlated with future behavioral intention.

As part of an organization commitment to continuous quality improvement, measurements of loyalty and future behavioral intentions (FBI) have become a priority. It seems intuitively rational that there should be a contributory link between quality of service, level of customer satisfaction, and the organization's success. "Higher quality of performance and levels of satisfaction are perceived to result in increased loyalty and future visitation, greater tolerance of price increases, and an enhanced reputation." (Baker & Crompton, 2000). Each of these are critical in regard to increased revenue, namely through intent to return and to positively recommend. These actions are generally a result of customer loyalty.

As previously discussed, delivering high quality service is important because research has indicated that it costs about five times as much money, time and resources to attract new customers as it does to retain existing ones (Pizam & Ellis, 1999). Oliver elaborates by stating that "customer loyalty is a deeply held commitment to re-buy or re-patronize a preferred product or service consistently in the future, despite situational influence and marketing efforts having the potential to cause switching behavior" (1997, p. 392). Deming (1982) argues that profit comes from repeat customers; customers who boast about the product and services they receive and bring their friends with them the next time, in other words, loyal customers. Additionally, he suggests that while an

unhappy customer will go to someone else, a customer who is only just satisfied may also change because they cannot lose much and they could quite possible gain.

Both hypotheses 2 and 3 were investigated by calculating the mean quality scores for each of the 32 scale items and correlating (Pearson's product moment correlation) these with both a single item measure of overall satisfaction and a mean future behavioral intention (FBI) score also gathered as part of the research. Results of this test (Table 11) show a significant positive correlation with future behavioral intention (0.334; Sig. < 0.001) but a much stronger positive correlation with overall satisfaction (0.459; Sig. < 0.001). Results confirm the view expressed within Hypothesis H2 and the mediating role of satisfaction as expressed within hypothesis H3.

Academic Implications

One of the goals of every research project is that it will lead to a better understanding of some phenomena. In academic terms, this may mean that a previous construct or hypothesis is retested and supported or perhaps, a new, better way of answering a specific question is found. All in all, the importance of the project must be highlighted which is what this section attempts to do.

An important factor is the unique setting that was chosen for this project. To the researchers best knowledge, very little, if any research has been conducted on the MWR service provision with the United States Army. While at first glance the importance of such an arena may be questioned, when one considers the scale of the services provided, the relevancy becomes much clearer. Though this project sought only information from the Anniston Army Depot, the same research and measurement instrument could be used for the entire United States Army. The United States Army employees over 250,000

civilians and around 1,110,600 soldiers and with numbers like these; one can see just how important this project could be. Since BRAC is of importance and cutting costs is one of the main goals of the Army at this point, identifying places within MWR that could be restructured, cut out, or improved upon is of paramount importance. Therefore, this project has provided what will hopefully be the groundwork for more research within MWR.

For this research, an IPA technique using a modified SERVQUAL scale was used. IPA, or Importance-Performance Analysis, was developed as a tool to develop marketing strategies and has gained popularity over recent years for its simplicity, ease of application and diagnostic value. IPA is best described as an absolute measure of performance, which also seeks to identify the underlying importance ascribed by consumers to the various quality criteria under assessment (Martilla and James, 1977). The objective is to identify which attributes, or combinations are more influential in repeat purchase behavior and which have less impact. This research showed that the IPA technique using a modified SERVQUA scale can be used and can be a reliable and valid research procedure.

Practitioner Implications

In a general sense, the implications for this project point the practitioner toward the realization that customer satisfaction, perceived service quality and future behavioral intentions cannot be ignored. In fact, both customer satisfaction and perceived service quality were found to have strong correlations with future behavioral intentions. This is an important fact to note because of the implications is has for conducting business on the Depot.

By knowing exactly which programs their customers are satisfied with, the Directorate can focus attention to other aspects of the MWR program that need help. By focusing on these specific programs that need attention, there is an opportunity for the practitioner to enhance the performance of that particular program. This could, in turn, create a higher level of perceived service quality in the eyes of their customers which will most likely also lead to higher levels of satisfaction. If this is the case, and as shown by this research, it is promising that the customers will return and, with luck, promote the use of the services to their friends and family. For example, Noise Level in Facility and Error Free Service Delivery are performing quite well so attention should be focused more on Parking Availability which scored the lowest overall.

Alternately, if MWR sees a program that is performing extremely well in the 'satisfaction' scale but ranks low in 'importance' they will know it is not necessarily important to focus time, energy and resources on that project. It will allow them to take the time to work on increasing the performance of programs that are ranking extremely low in 'satisfaction' but high in 'importance'. The Directorate will be able to focus in on this program and work to improve it. Specifically, Clean Facilities and Responsiveness to New Ideas are viewed by MWR consumers as important but are not performing up to par in the eyes of their consumers. Not only will this hopefully increase satisfaction for their customers, but perhaps it will also help cut down on costs since money will no longer be spent on programs that do not need it. By accurately identifying these high and low ranking programs, this research project will be able to help the Depot focus the continuous quality improvement efforts of the Directorate of Family and Community

Activities which is exceptionally important during this time of nationwide Base Realignment and Closure.

Aside from Anniston Army Depot's MWR program, this procedure can be replicated by other organizations in not only the hospitality industry, but in the wider service sector as well. The use of IPA based on a modified SERVQUAL scale can easily be used as a tool by researchers or service organizations investigating service quality, satisfaction and future behavioral intentions. Not only is it somewhat simple to execute, it is a great instrument to aid any organization in their quest for continuous quality improvement. It highlights areas within an organization that may need work and can evaluate performance across all types of service encounters.

Not only will the knowledge of the performance and satisfaction levels of each of these programs benefit customers of these service organizations, but it will also benefit the employees as well as those who own and run the service organizations. The employees will be more satisfied within their working life. It seems quite possible they would deal with less complaints and by working in a smoothly run environment, they would also be quite proud to work there and serve the needs of the organization and their customers. As for the owners of these organizations, this is an invaluable tool which can shine a light on areas that need help. Money could be spent only in the places it needs to be spent instead of being wasted on parts of the organization that do not need it. Additionally, by having satisfied customers, the likelihood of their repeat business is high, as shown by this research. As previously discussed, this is significant because research has indicated that it costs about five times as much money, time and resources to attract new customers as it does to retain existing ones.

Measurement Instrument Performance

Turning to the research instrument, it has demonstrated good overall reliability and excellent dimension based reliability scores. As was described in detail in the analysis section, the construct validity and reliability of the instruments used in this study were found to be well within the acceptable ranges as prescribed by modern statistical methods. However, while strong evidence exists to support the convergent validity of the instrument, the issue of discriminant validity is somewhat suspect indicating a high degree of co-linearity. Sadly, there is no real way to counteract this and/or offer comment on how the returns were filled out. The issue of response and respondent composition is also an issue in that over 90% of respondents are classified as Federal Employees. The contract population on the depot remains very much underrepresented as a user group.

Based on work with the focus groups, the SERVQUAL scale was used as a starting point but needed significant modification in order to be adapted to the service setting selected for this project. As detailed in earlier sections, the five factor structure proposed by the researchers responsible for developing the SERVQUAL scale was not realized. This has been one of the main critiques of this scale since its inception. Other researchers have also failed to replicate the original five factors (Cronin & Taylor, 1992). In this case, there are several potential reasons as to why the scale did not factor out.

One of these may be the unique setting within which this study was conducted. Very little previous research was found to exist in the context of a military base. This may simply mean that the IPA technique based on a modified SERVQUAL scale is not applicable to such a setting. Another potential reason that this measurement instrument did not appear to work is the high level of co-linearity. As stated previously, it is unclear

how the questionnaire was distributed and as such, it appears some may have been arbitrarily filled out just to give the appearance that more were completed.

One important fact of note is the user-friendliness of the IPA technique. This technique is not only easy to use from the researchers' perspective, but is also quite easy for outsiders to read and interpret the results. The IPA grid allows a visual representation that simply shows which quadrant variables fall in. During this research, the results were reported to the Directorate of MWR at the Anniston Army Depot. The Directorate noted how easy to understand the results were and how much it was appreciated.

Future Research

As stated earlier, one of the major limitations of this study is that fact that the sample group consisted of mostly federal employees. Because there was no measure of other forms of employees, this leads the researcher to the conclusion that further research is needed to truly understand the perceptions of service quality, customer satisfaction and future behavioral intentions at the Anniston Army Depot. It would be quite interesting to replicate this research in an attempt to ascertain the impressions and thoughts of other forms of employees and customers. Perhaps a different sample group would yield different results.

There seems to be a degree of co-linearity that could be explained by how the questionnaires were completed. It would be interesting to see how the research results would change if the manner of distribution was altered. Perhaps the primary researcher could be in charge of the distribution or form a true intercept survey at a few key points.

It would also be interesting to conduct this study on a month to month basis to see if thoughts and feelings change. It would be a great way to see if the Depot's continuous

quality improvement efforts were paying off. Additionally, if things had changed, would other programs be highlighted as 'needs work' areas? In addition to seeing how the CQI attempts were going, there would also be a good chance of getting employees and customers to fill out the questionnaire who had originally not participated in the study.

Another possible venue for future research would be to conduct this study at other depots and compare and contrast the results with the Anniston Army Depot's MWR program. This would be a great way for each depot to strive to be better and have more satisfied customers than the other. Inherent in the personality of most military people is the love of competition. Not only would this prove to be a fun way to get everyone involved, but it could also be a incite employees to work harder. The Army's motto has always been "Be all that you can be" and this sort of competition could be a way for the employees to work toward this goal.

Lastly, it might be interesting to conduct this research in other service sectors. Perhaps one could investigate using this measurement instrument in private organizations or within non-profit organizations. It would be quite easy to alter the basics of this instrument in a way that could allow it to be used for almost any service organization.

Conclusion

This chapter has provided a discussion based on the results of this study. Each hypothesis was highlighted, and the associated results were revealed. Also included were some of the implications that this research has on both the academic and practical arenas. From there, a discussion on the performance of the measurement instruments, a summary of the major contributions of this study and the associated limitations were also included.

The chapter ended with a number of recommendations to conduct the same basic study, albeit with some suggested changed needed to improve the study.

In summary, the results point to an excellent picture of service provision across all outlets and the Directorate of Community and Family Activities is to be commended on this. While most variable importance scores are greater than the corresponding performance scores ascribed to each, performance is nonetheless well above average in all instances. While statistically significant negative differentials have been identified in most instances, performance in all cases has been good. These differentials should be used to direct the continuous quality improvement efforts of the various outlets at Anniston Army Depot.

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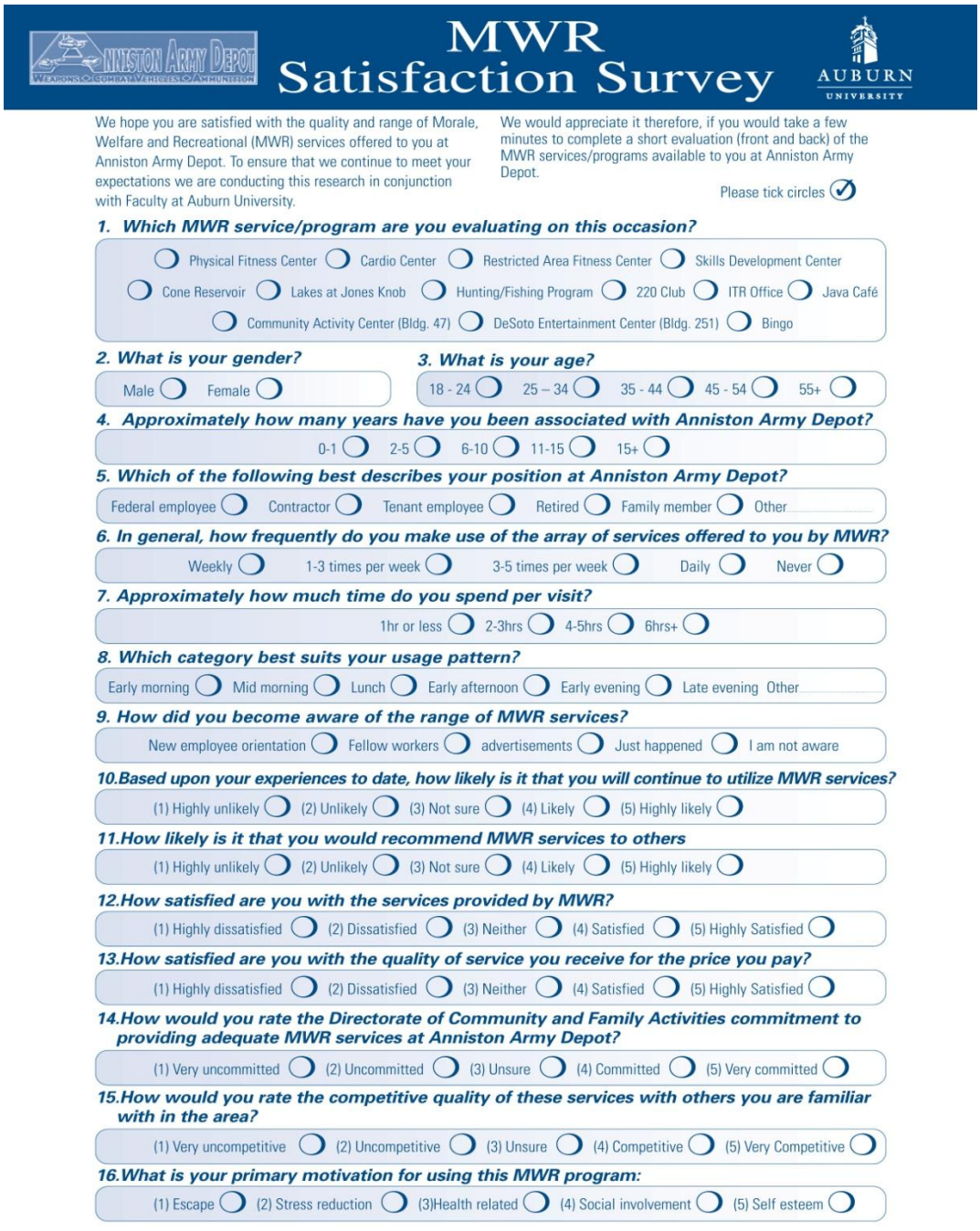
APPENDIX



ANNISTON ARMY DEPOT
WEAPONS · COMBAT VEHICLES · AMMUNITION

MWR Satisfaction Survey

AUBURN UNIVERSITY

We hope you are satisfied with the quality and range of Morale, Welfare and Recreational (MWR) services offered to you at Anniston Army Depot. To ensure that we continue to meet your expectations we are conducting this research in conjunction with Faculty at Auburn University.

We would appreciate it therefore, if you would take a few minutes to complete a short evaluation (front and back) of the MWR services/programs available to you at Anniston Army Depot.

Please tick circles ✓

1. Which MWR service/program are you evaluating on this occasion?

Physical Fitness Center ◯ Cardio Center ◯ Restricted Area Fitness Center ◯ Skills Development Center ◯
Cone Reservoir ◯ Lakes at Jones Knob ◯ Hunting/Fishing Program ◯ 220 Club ◯ ITR Office ◯ Java Café ◯
Community Activity Center (Bldg. 47) ◯ DeSoto Entertainment Center (Bldg. 251) ◯ Bingo ◯

2. What is your gender?

Male ◯ Female ◯

3. What is your age?

18 - 24 ◯ 25 – 34 ◯ 35 - 44 ◯ 45 - 54 ◯ 55+ ◯

4. Approximately how many years have you been associated with Anniston Army Depot?

0-1 ◯ 2-5 ◯ 6-10 ◯ 11-15 ◯ 15+ ◯

5. Which of the following best describes your position at Anniston Army Depot?

Federal employee ◯ Contractor ◯ Tenant employee ◯ Retired ◯ Family member ◯ Other.....

6. In general, how frequently do you make use of the array of services offered to you by MWR?

Weekly ◯ 1-3 times per week ◯ 3-5 times per week ◯ Daily ◯ Never ◯

7. Approximately how much time do you spend per visit?

1hr or less ◯ 2-3hrs ◯ 4-5hrs ◯ 6hrs+ ◯

8. Which category best suits your usage pattern?

Early morning ◯ Mid morning ◯ Lunch ◯ Early afternoon ◯ Early evening ◯ Late evening ◯ Other.....

9. How did you become aware of the range of MWR services?

New employee orientation ◯ Fellow workers ◯ advertisements ◯ Just happened ◯ I am not aware ◯

10. Based upon your experiences to date, how likely is it that you will continue to utilize MWR services?

(1) Highly unlikely ◯ (2) Unlikely ◯ (3) Not sure ◯ (4) Likely ◯ (5) Highly likely ◯

11. How likely is it that you would recommend MWR services to others

(1) Highly unlikely ◯ (2) Unlikely ◯ (3) Not sure ◯ (4) Likely ◯ (5) Highly likely ◯

12. How satisfied are you with the services provided by MWR?

(1) Highly dissatisfied ◯ (2) Dissatisfied ◯ (3) Neither ◯ (4) Satisfied ◯ (5) Highly Satisfied ◯

13. How satisfied are you with the quality of service you receive for the price you pay?

(1) Highly dissatisfied ◯ (2) Dissatisfied ◯ (3) Neither ◯ (4) Satisfied ◯ (5) Highly Satisfied ◯

14. How would you rate the Directorate of Community and Family Activities commitment to providing adequate MWR services at Anniston Army Depot?

(1) Very uncommitted ◯ (2) Uncommitted ◯ (3) Unsure ◯ (4) Committed ◯ (5) Very committed ◯

15. How would you rate the competitive quality of these services with others you are familiar with in the area?

(1) Very uncompetitive ◯ (2) Uncompetitive ◯ (3) Unsure ◯ (4) Competitive ◯ (5) Very Competitive ◯

16. What is your primary motivation for using this MWR program:

(1) Escape ◯ (2) Stress reduction ◯ (3)Health related ◯ (4) Social involvement ◯ (5) Self esteem ◯

PTO

Level of Satisfaction					Please rate your opinion in respect of the points below on a scale if 1-5	Importance to You				
Very Dissatisfied 1	2	3	4	Very Satisfied 5		Lo				High
❍	❍	❍	❍	❍	1.Toilets and changing facilities	①	②	③	④	⑤
❍	❍	❍	❍	❍	2. The location of facilities	①	②	③	④	⑤
❍	❍	❍	❍	❍	3. Parking availability	①	②	③	④	⑤
❍	❍	❍	❍	❍	4. Interior décor and design	①	②	③	④	⑤
❍	❍	❍	❍	❍	5. Physical condition/appeal of facilities	①	②	③	④	⑤
❍	❍	❍	❍	❍	6. Cleanliness and upkeep of facilities	①	②	③	④	⑤
❍	❍	❍	❍	❍	7. Access to facilities	①	②	③	④	⑤
❍	❍	❍	❍	❍	8. Hours of operation	①	②	③	④	⑤
❍	❍	❍	❍	❍	9. Sincerity of staff approach	①	②	③	④	⑤
❍	❍	❍	❍	❍	10. Responsiveness of service staff	①	②	③	④	⑤
❍	❍	❍	❍	❍	11. Individual attention afforded to me/personalized service	①	②	③	④	⑤
❍	❍	❍	❍	❍	12. Responsiveness to individual needs	①	②	③	④	⑤
❍	❍	❍	❍	❍	13. Courtesy of service staff	①	②	③	④	⑤
❍	❍	❍	❍	❍	14. Flexibility of staff	①	②	③	④	⑤
❍	❍	❍	❍	❍	15. Staffing levels	①	②	③	④	⑤
❍	❍	❍	❍	❍	16. Willingness of staff to help/answer questions	①	②	③	④	⑤
❍	❍	❍	❍	❍	17. Wait times/lines for service	①	②	③	④	⑤
❍	❍	❍	❍	❍	18. Delivery on service promise	①	②	③	④	⑤
❍	❍	❍	❍	❍	19. Staff dress code	①	②	③	④	⑤
❍	❍	❍	❍	❍	20. Error free service delivery	①	②	③	④	⑤
❍	❍	❍	❍	❍	21. Staff communication skills	①	②	③	④	⑤
❍	❍	❍	❍	❍	22. Employee product knowledge	①	②	③	④	⑤
❍	❍	❍	❍	❍	23. Noise levels in facility	①	②	③	④	⑤
❍	❍	❍	❍	❍	24. The behavior of other customers	①	②	③	④	⑤
❍	❍	❍	❍	❍	25. Personal safety and security	①	②	③	④	⑤
❍	❍	❍	❍	❍	26. Staff problem solving abilities	①	②	③	④	⑤
❍	❍	❍	❍	❍	27. Compensation for problems encountered	①	②	③	④	⑤
❍	❍	❍	❍	❍	28. Responsiveness to new ideas	①	②	③	④	⑤
❍	❍	❍	❍	❍	29. Sincerity in approach to problem solving	①	②	③	④	⑤
❍	❍	❍	❍	❍	30. Willingness to apologize and accept blame when problems occur	①	②	③	④	⑤
❍	❍	❍	❍	❍	31. Consideration of inconvenience	①	②	③	④	⑤
❍	❍	❍	❍	❍	32. Sincerity of approach when things go wrong	①	②	③	④	⑤

Please feel free to share any other comments you might have.

Thank you for your help