Gap Analysis of Health Services

CLIENT SATISFACTION SURVEYS

by Dianne Dyck, BN, MSc, COHN

There is a saying "The customer is God" (Young-blood, 1994). However, few occupational health services focus on client satisfaction. Traditionally, the emphasis has been on evaluating the quality of care provided, believing the client's knowledge of expert care is limited (Belk, 1990; Parillo, 1993; Walters, 1995). However, with the increased level of client knowledge about health care and an increasing awareness of consumerism, occupational health services need to pay attention to client satisfaction.

Client satisfaction can be defined as client awareness of care received in a timely fashion and of the many variables in the environment contributing to recovery (Sullivan, 1988). Successful companies know that client focus is essential. By knowing clients' expectations, they are able to formulate their fundamental business structure. In addition, client focused companies recognize that client perceptions stem from every contact with the company. For this reason, it is important to determine the degree of harmony between client expectations and the service quality providers believe they are delivering.

This article defines service quality, identifies the causes of service quality problems, and outlines what measures occupational health nurses take, with the assistance of a specially designed instrument, to solve these problems while improving client care services.

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SERVICE QUALITY

Service quality can be determined by the extent of discrepancy between client expectations, or desires, and their perceptions of services they received (see Figure 1). The key to good service quality is meeting or exceeding what clients expect from the service (Zeithaml, 1990).

Service quality is important because businesses function in a highly competitive service economy. Efficient servicing can be a source of superiority. "Excellent service pays off because it creates true customers" and "true customers are like annuities" (Zeithaml, 1990).

Excellent service also differentiates otherwise similar competitors. Excellent service companies perform better at the bottom line because they perform more effectively for their clients. Clients respond to excellent service companies because they perceive more value than in the competitors' offerings. Value is the client's "overall assessment of the utility of a product based on perceptions of what is received and what is given" (Zeithaml, 1990). The concept of value helps to explain why companies with strong service reputations are able to charge higher prices than competitors. Clients are willing to pay more for confidence in the quality of the service and the product.

Services are more difficult to evaluate than products. First, services are intangible: "when what is being sold is purely performance, the criteria customers use to evaluate it may be complex and difficult to capture precisely" (Zeithaml, 1990). Second, services are heterogeneous. Performance often varies from provider to provider, from client to client, and from day to day (Zeithaml, 1990). Third, the production and consumption of many services are inseparable. "Quality in services often occurs during the service delivery, usually in an interaction between the client and the provider, rather than being engineered at
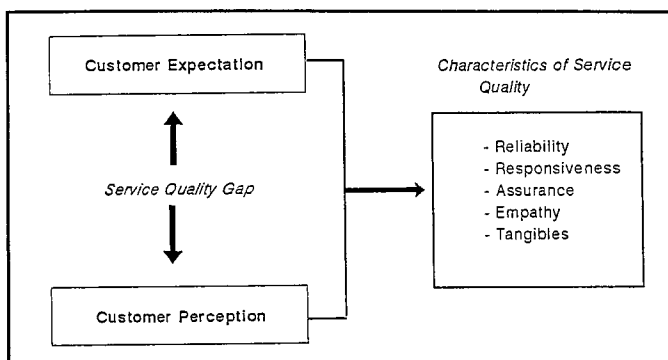
Figure 1: Components of service quality.

the manufacturing plant and delivered intact to the client" (Zeithaml, 1990).

The factors that influence client expectations are:
- Word of mouth communications;
- Personal needs of the clients;
- Past experience with using a service; and
- External communications from service providers about the service (Zeithaml, 1990).

Clients judge service quality by the criteria listed in Table 1.

GAP ANALYSIS

The service gap analysis methodology integrates the concepts, ideas, and findings that emerged from a study of service quality which began in 1983. The research, sponsored by the Marketing Science Institute in Cambridge, MA (Parasuraman, 1988) resulted in the conceptual models of service quality and a methodology for measuring client perceptions of service quality—the gap analysis.

If the key to ensuring good service is meeting or exceeding what clients expect from the service, judgments of high and low service quality depend on how clients perceive the actual service performance in the context of what they expected. The client's perception of service quality is altered when there are gaps between:
- The client's expectations and the service provider's perception of those expectations (Gap 1).
- The service provider's perception of client expectations and the specifications of service quality under which the services are governed (Gap 2).
- The specifications of service quality and the actual service that is delivered (Gap 3).
- The actual service that is delivered and what the service organization communicates to the clients about what it will deliver (Gap 4).
- The client's expected level of service quality and their perception of what level of service quality they actually received (Gap 5).

Gap 1

Gap between the client's expectations and the service provider's perception of those expectations. Knowing what clients expect is the first and most critical step in delivering quality service. This gap sometimes occurs because companies miss the mark by thinking inside out. They know what clients should want and deliver that.

When this happens, services do not match client's expectations. Important features are omitted, and levels of performance on provided features are inadequate.

Contributing factors accounting for this gap include insufficient marketing research, inadequate use of marketing research findings, and insufficient communication between client and service provider. The first step in improving the quality of service is for service providers to acquire accurate information about client expectations.

Gap 2

Gap between the service provider's perception of client expectations and the specifications of service quality under which the services are governed. Correct perceptions of client expectations are necessary, but not sufficient for achieving superior quality service. Once service providers accurately understand what clients expect, they face a second critical challenge of using this knowledge to set appropriate service quality standards. Contributing factors accounting for this gap include inadequate commitment to service quality, perception of unfeasibility (i.e., "we can't possibly do what the clients expect us to do"), inadequate standardization of tasks, and absence of goal setting.

Another prerequisite for providing high service quality is the presence of performance standards.

Gap 3

Gap between the specifications of service quality and the actual service delivered. In some cases, service providers do understand client expectations and do set appropriate specifications (either formally or informally). Yet the service delivered by the organization still falls short of what clients expect. The primary factor for a service performance gap is that employees are unable and/or unwilling to perform the service at the desired level. This may be a result of inadequate role clarity, role conflict, poor employee-job fit, poor employee-technology fit, inappropriate measurement/reward systems, lack of empowerment, and/or lack of teamwork.

Gap 4

Gap between the actual service delivered and what the service organization communicates to the clients about what it will deliver. Promises made by a service group become the standard against which clients assess service quality. A discrepancy between actual service and promised service has an adverse effect on client perceptions of service quality, if the service has been over-promised.

Gap 5

Gap between the clients' expected level of service quality and their perception of the level of service quality actually received. A gap in any one of the four areas listed above is the root cause of a gap between what clients expect to receive and client perception of service quality level actually received. The key to eliminating this last gap is to close Gaps 1 through 4 and work to keep them closed. Figure 2 is a summary of reasons why gaps exist and areas to investigate when closing the gaps.

TABLE 1
Dimensions of Service Quality

Dimensions of Service Quality	Definition	Example
Tangibles	Appearance of physical facilities, equipment, personnel, and communication materials	Are the OHS facilities attractive? Are the EAP advisors dressed appropriately? Is communication to clients easy to understand (i.e., correspondence letters, memos, presentations)?
Reliability	Ability to perform the promised service dependably and accurately	Are the service records free of error? Is a client's concern addressed properly the first time?
Responsiveness	Willingness to help clients and provide prompt service	Do we give clients a specific time when we will see them? How long do clients have to wait for an appointment?
Assurance	*Competence:* possession of the required skills and knowledge to perform the service	Can we process client needs without fumbling around? Are we able to answer client questions upon request?
	Courtesy: politeness, respect, consideration, and friendliness	Do we have a friendly attitude? Do we act like clients are interrupting us when they ask a question?
	Credibility: trustworthiness, believability, honesty of the service provider	Does the department have a good reputation? Are our service costs consistent with the services provided?
	Security: freedom from danger, risk or doubt	Is client confidentiality trusted? Can clients be confident that the prescribed treatment/modification is safe for use?
Empathy	*Access:* approachability and ease of contact	How easy is it for clients to talk to a care giver when they have a problem? Is the service open at hours that a client can get help?
	Communication: keeping clients informed in language they can understand and listening to them	When clients call the department, are we willing to listen to them? Can we explain clearly all the various details of the client's circumstances?
	Understand the client: making the effort to know clients and their needs	Do we recognize clients after their initial visit? Are we willing to be flexible enough to accommodate the client's schedule?

Gaps 1 and 2 are managerial gaps. Gap 1 stems from lack of manager understanding of customer expectations. Gap 2 represents manager failure to set appropriate service qualifications. Gaps 3 and 4 are front line gaps that pertain to front line employees. Front line employees' service delivery performance may fall short of service specifications (Gap 3) and/or promises made through external communications (Gap 4). Gap 5 results from gaps 1 through 4.

ADDRESSING SERVICE QUALITY GAPS

Figure 3 provides an overview of potential causes of service quality gaps.

Gap 1: Client Expectations/Management-Perceptions Gap

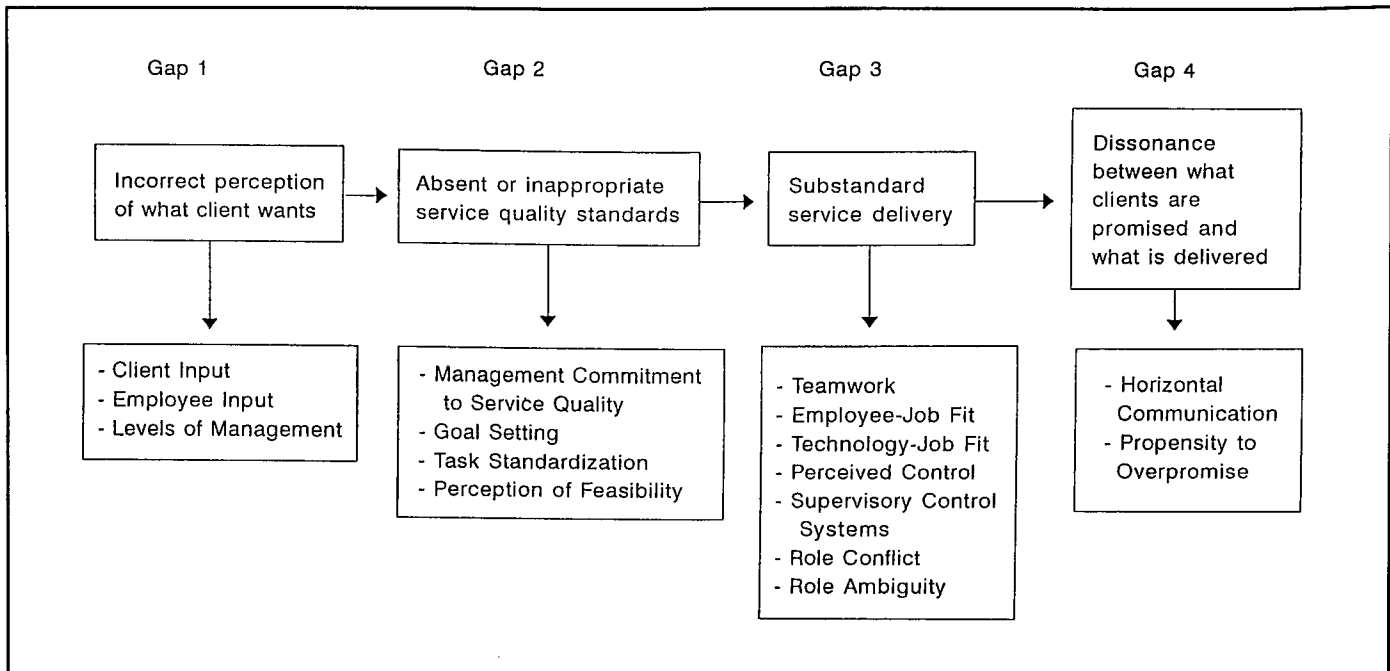Knowing what clients expect is the first and most critical step in delivering quality service. A problem

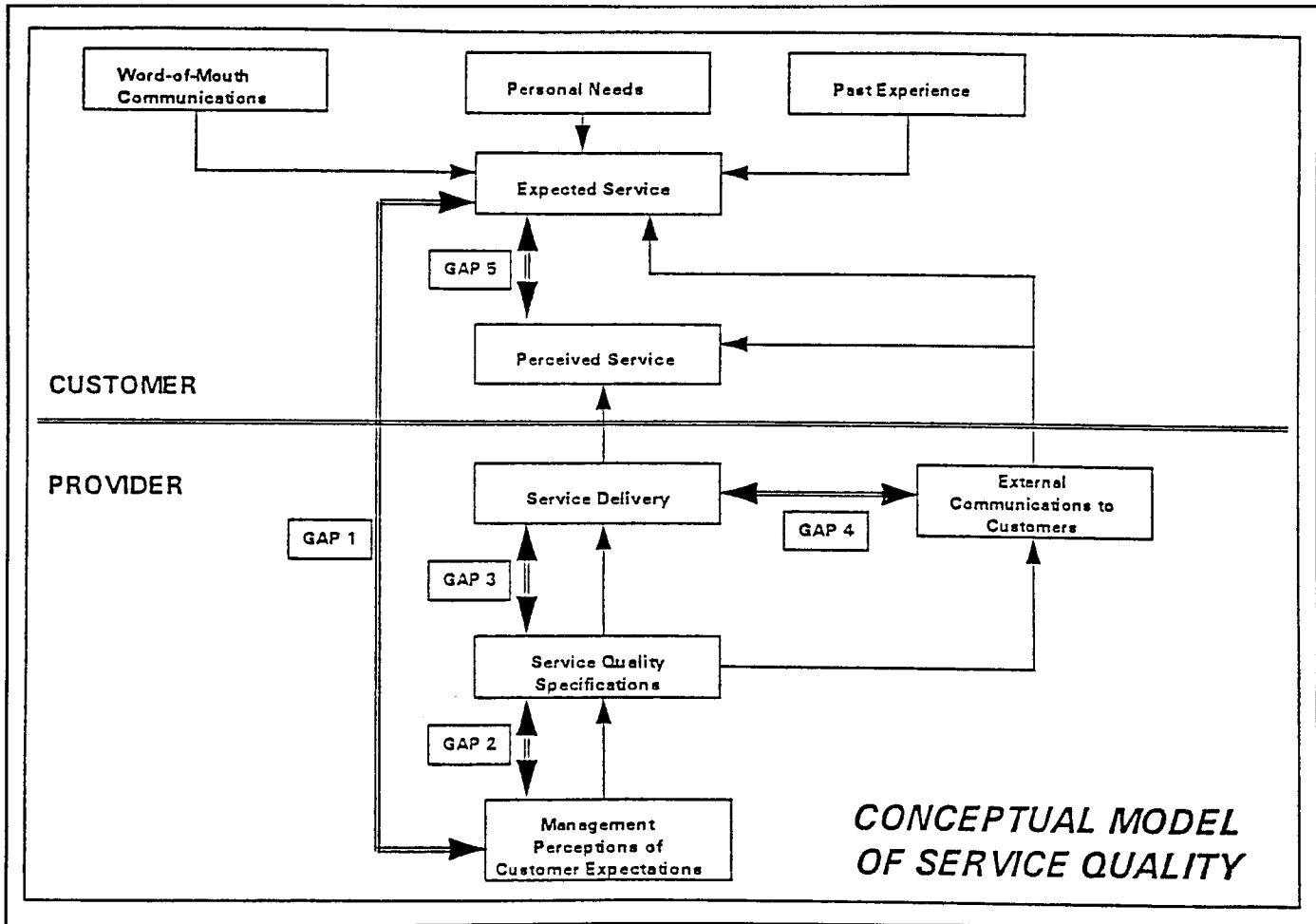**Figure 2: Reasons why gaps exist and areas to investigate.**

Figure 3: Potential causes of service quality shortfalls.

occurs when servers make decisions based on what they think clients want, rather than accurately determining client perceived needs. When this happens, important features are left out and the levels of performance on the features provided are inadequate. Key factors contributing to Gap 1 are listed in Table 2.

TABLE 2
Factors Contributing to Gap 1

Problem	Ways to Close Gap 1
Insufficient marketing research	Research client expectations
	Use complaints strategically
	Research what clients want from similar services
	Research intermediate clients such as contact professionals/staff
	Conduct key client studies
	Track client satisfaction with individual servicing
	Engage in comprehensive client expectation studies
Inadequate use of marketing research findings	Use market research findings effectively
Lack of interaction between management and clients	Increase management-client interaction
Insufficient upward communication from contact personnel to management	Improve upward communication from contact professionals/staff
Too many levels between contact personnel/staff and management	Flatten the organizational structure

TABLE 3
Factors Contritubing to Gap 2

Problem	Ways to Close Gap 2
Inadequate management commitment to service quality	Commit to quality Get middle management commitment as well Develop performance standards that mirror management's perception of client expectations
Perception of unfeasibility	Create possibilities
Inadequate standardization of tasks	Standardize tasks with hard technology (databases, systems) and with soft technology (policies, procedures, changed work processes)
Lack of goal setting	Set service quality goals

Management may be unaware of the characteristics or service features that are valued by clients. Thus, they may make decisions and resource allocations resulting in client perceptions of poor service quality. The necessary first step in improving service quality is for management to obtain accurate information about client expectations.

Gap 2: Management Perception/Service Quality Specifications Gap
Once management understands client expectations, the next challenge is using this knowledge to set service quality standards. However, management may not be willing or able to meet these expectations or the actual specifications established for service delivery. The causes for Gap 2 are included in Table 3.

Gap 3: Service Quality Specifications/Service Delivery Gap
Instances occur when management does understand client expectations and does set appropriate service spec-

ifications. However, service delivery falls short of what clients expect. The difference between service specifications and the actual service delivery is the service performance gap. Employees are unable/unwilling to perform the service at a desired level. Opportunities for mistakes and misunderstandings exist when service providers and clients interact. Both clients and providers experience and respond to each other's mannerisms, attitudes, competencies, moods, and language. Maintaining service quality depends on maintaining a work force willing and able to perform at specified levels.

The factors contributing to Gap 3 are included in Table 4.

Gap 4: Service Delivery/External Communications to Clients Gap
Promises made by a service are the standard against which clients assess service quality. A discrepancy between actual and promised service has an adverse effect on client perceptions of service quality. It reflects an underlying breakdown in coordination between those responsible for the delivering the service and those charged with describing/promoting the service.

Another way marketing can influence client expectations is when service neglects to inform clients of all the behind the scenes activities performed to protect them. By making clients aware of the service's commitment to quality service, improvements in client service perceptions are realized. Clients who believe a service/agency is acting to serve their best interests are more likely to perceive service

TABLE 4 Factors Contributing to Gap 3	
Problem	**Ways to Close Gap 3**
Employee-job fit: technology-job fit	Improve employee-technology-job fit
Employee role ambiguity	Provide role clarity
Role conflict	Eliminate role conflict
Lack of perceived control	Empower service providers
Inappropriate supervisory control systems	Measure and reward service performance
Lack of teamwork	Nurture teamwork
	Actively build teamwork

TABLE 5 Factors Contributing to Gap 4	
Problem	**Ways to Close Gap 4**
Inadequate horizontal communication	Open channels of communication between those marketing the service and those providing the service
Avoid over-promising	Develop appropriate and effective communications about the service
Differing policies and procedures	Provide consistent servicing throughout the agency/company

delivery favorably. Service perceptions can be enhanced by educating clients to be better consumers and services users. Factors contributing to Gap 4 are included in Table 5. By closing Gaps 1 through 4, Gap 5 is eliminated.

SERVQUAL INSTRUMENT RELIABILITY AND VALIDITY

The SERVQUAL instrument (Zeithaml, 1990) was designed to help companies better understand service expectations and client perceptions. The instrument is a multi-item scale with good reliability and validity. A complete discussion of the instrument's reliability and validity can be found in Parasuraman (1988).

The SERVQUAL instrument can be used in a varied number of agencies, companies, or services. The developers acknowledge it can be adapted to meet the individual needs of a company. The reliability and validity of SERVQUAL are preserved if the intent and order of the questions remains the same (Zeithmal, 1990).

In addition to computing service quality gaps, SERVQUAL can also be used to:
● Identify trends in client expectations and perceptions over time;
● Compare a company's/service's SERVQUAL scores against those of competitors;
● Examine client segments with differing quality perceptions; and
● Assess quality perceptions of internal customers.

INDUSTRY APPLICATION

As part of the total quality management process, many service departments in a major Canadian oil and gas company performed client satisfaction surveys in an effort to continually improve service quality and delivery. The occupational health service (OHS) participated in the effort and chose gap analysis as the method used to

evaluate the OHS, managed rehabilitation care program (MRC), and employee assistance program (EAP).

Because SERVQUAL was designed to evaluate business servicing, adjustments were required. When questions were adapted for use with the occupational health service, care was taken to ensure that service qualities were measured according to the original instrument framework. In addition, all questions were kept in original order of presentation. Comment sections were included to augment standardized questions and to elicit responses not provided by the questions. As a result, three survey tools were designed using the gap analysis technique.

Survey Methodology

The number of OHS surveys distributed was calculated on the basis of randomly choosing 100 employees (out of a possible 222 occupational health visits) who received health services between January 1, 1994 and September 30, 1994.

The MRC surveys were distributed to 100% of employees participating in a modified work plan while on short or long term disability between January 1, 1994 and September 30, 1994. For each employee on a modified work plan, the corresponding manager was included in the survey process. These client-participant and client-manager survey numbers are distinguished with the suffix P and M, respectively.

The EAP surveys were distributed to 100% of employees seen by the EAP consultant service between January 1, 1994 and September 30, 1994. All EAP clients were contacted by the EAP consultants to confirm their consent to participate in the survey. In addition, all relevant health services caregivers working with the OHS, MRC, and EAP were sent surveys.

The assessment of service quality gaps was performed with two questionnaires. One questionnaire was sent to the service clients; the other questionnaire was distributed to management and staff caregivers. The client questionnaire

focused on questioning clients about their priorities, their expectations for service quality, and their perceptions of quality of service received. The caregiver questionnaire focused on measuring the degree to which:
- The caregivers understand client expectations.
- Service quality standards are formalized within the service group.
- Actual service delivery meets service quality standards.
- The degree to which the service delivers what is promised to clients.

Data Analysis

The data analysis of the client survey measures the service quality from the client's point of view. The caregiver survey measures the service quality from the service provider's point of view and identifies the reasons gaps may be present. Each question in the survey relates these surveys to a specific dimension of service quality (see Table 1). In both instances, the respondents are asked to report how they feel about each question and to place a weighted value on that particular dimension of service quality.

Scores are calculated for each response and for each dimension. The scores are then totaled to obtain an overall score and divided by the number of questions related to the dimension to arrive at an average overall score. To determine the importance of the dimension, the average overall score is multiplied by the weight given to that dimension resulting in its weighted score.

A difference, or gap, is identified by comparing the weighted scores provided by the client and the caregiver on each dimension of service quality. The lower the gap score is the better, as the client and the caregiver expectations and perceptions are almost the same. Large gaps, greater than 1.0, indicate a need for service improvements.

Results

Service quality assessments of the OHS, MRC, and EAP indicated that clients of all three services perceived the service quality as relatively high, and any gaps revealed in the survey were small. One finding common to the three services was if caregivers desire to increase their service performance, they should:
1. Increase marketing research, i.e., track satisfaction on individual transactions, use complaints strategically.
2. Assess whether caregivers have the propensity to over-promise and under-deliver to clients. Because clients rated reliability as the most important service quality, this may be an area of service quality on which to focus.
3. Improve communication among clients, caregivers, and service management to ensure that what is being communicated to clients is being delivered, and that service has sufficient resources to meet client expectations.
4. Assess performance measurements and reward systems to ensure that caregivers are rewarded for quality service they provide.

Other improvement opportunities specific to each service were identified. These specific program results
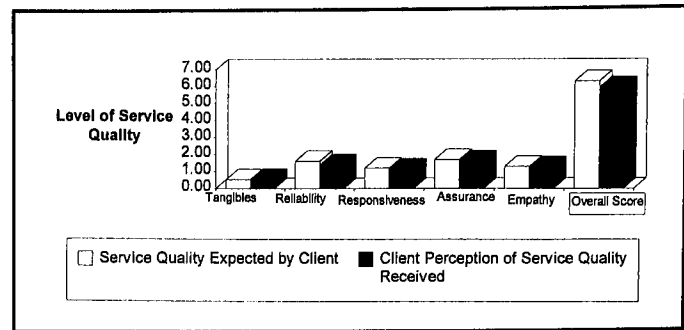

Figure 4: OHS customer expectations vs perceptions—Gap 5.

are described below.

OHS Survey Results. Of the 100 surveys sent out to OHS clients, 63 clients responded (63%); and 57 surveys (57%) were used for analysis. Of the surveys received, six were incomplete and could not be used. The graph in Figure 4 depicts the OHS client expectations as compared to their perceptions. The gaps between client expectations and client perceptions for OHS were small for the five service dimensions (discussed in Table 1). The overall gap score was also small, indicating that good service quality exists.

Findings were:
- OHS caregivers had a good understanding of what service qualities were the most important to clients. However, if the priorities given to service qualities are examined, clients indicated that the most important service qualities were reliability and assurance, while the caregivers perceived assurance and responsiveness as most important to clients. This suggests more attention could be given to the service quality of reliability.
- OHS caregivers generally understood and met client expectations. However, clients had higher expectations of the OHS reliability than they perceived in terms of care received.

MRC Service Survey Results. Of the 67 surveys sent out to MRC clients, 51 clients responded (76%); 48 (72%) were used for analysis. Of the surveys received, three were incomplete and could not be used. The graph in Figure 5 depicts both the client-manager and client-participant results. The gaps between client expectations and perceptions for MRC were generally small, but greater than what was seen for OHS.

Findings were:
- The MRC caregivers did not have a clear understanding of which service qualities are most important to clients. Client-participants indicated that the most important service quality was assurance, while client-managers rated reliability as being the most important service quality for them. In contrast, the caregivers thought the most important service qualities were reliability and empathy. According to the gap analysis model, more attention should be given by caregivers to assurance.
- The MRC caregivers may have understood that reliability was important to client-managers. However, they failed to understand how important the chosen service qualities were to clients. Client-participants rated assurance much higher in importance than caregivers. Client-managers placed reliability much higher in importance than did care-
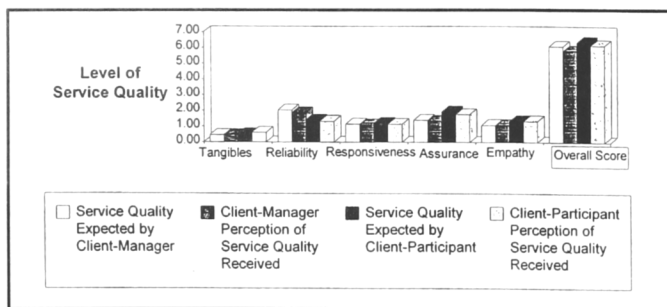
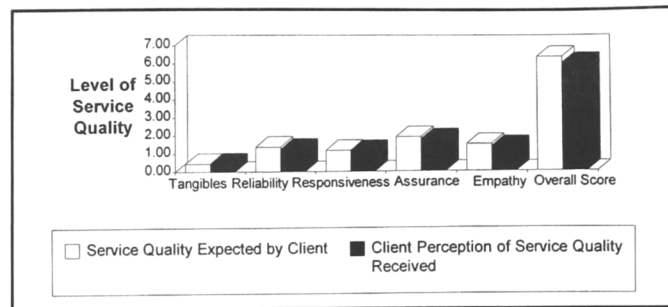**Figure 5: MRC client expectations vs perceptions—Gap 5.**

Figure 6: EAP client expectations vs perceptions—Gap 5.

givers. This indicates more attention should be given to the service qualities of assurance and reliability.

● The MRC caregivers generally understood and met both client groups' expectations. However, the client-participant group had a higher expectation of MRC assurance than they perceived in terms of care received. In contrast, the client-manager group had a higher expectation of MRC reliability than they perceived in care delivered to them.

EAP Survey Results. Of the 27 surveys sent out to EAP clients, 17 clients responded (63%) and were used for analysis. The graph in Figure 6 presents the gap between the client expectations and their perceptions. The overall gap score was small, indicating a high level of service quality.

Findings were:
● The EAP caregivers had a clear understanding of which service qualities were most important to their clients. The clients indicated that the most important service qualities were assurance and empathy. However, the clients rated assurance as more important than the caregivers perceived it to be to their clients.
● The EAP caregivers generally understood and met client expectations. However, the clients had higher expectations of EAP assurance, reliability, and empathy.

Additional information about the quality of the services came from the client commentaries the evaluators added to the SERVQUAL instrument.

Feedback supporting service caregivers were providing included:
● Reliable and quick responses are appreciated by employees.
● Security is vital: confidentiality of employee health information remains paramount and constant vigilance is required to uphold this confidentiality.
● Professional competence is important.
● Courtesy is important. Empathy is essential.
● Credible counseling and care is valued.

Feedback advising caregivers about areas which needed to be addressed included:
● Market the available health resources better.
● Advertise the "after hours" EAP services more.
● Examine the design of the service facility with a view to improving the facility layout.
● Advise employees of the existing and practiced confidentiality guidelines.
● Educate managers/supervisors on the use of OHS, MRC, and EAP as supports for employees.

● Educate employees, supervisors, human resources benefits personnel, human resources advisors, and occupational health advisors about their roles and responsibilities concerning MRC.
● Communicate more with all involved in MRC to ensure efficient business functioning and effective employee participation occurs.
● Pay more attention to the case management of employees off on workers' compensation (WCB).
● Be proactive regarding ergonomics, indoor air quality, employee wellness, mental/social health, and balancing work and family life.

When processing the survey, evaluators noted some design issues pertaining to SERVQUAL. Some of the problems encountered were:
● Awkwardly worded questions that were difficult for clients to interpret and understand.
● Redundant questions.
● Leading questions.
● Respondents who reported that they were too inexperienced with the service to answer the questions posed.
● Too much focus on quantitative measures, as opposed to qualitative measures.
● Service quality dimensions (tangibles, reliability, responsiveness, assurance, empathy) measured at a macro-level that proved difficult for clients. This resulted in a generalized questionnaire as opposed to a more specific one. Additionally, the survey instrument did not deal with qualitative factors about why individual cases were successes or failures.

Proposed Future Actions
● Continue to provide the same high quality of service.
● Work with human resource advisors and benefits personnel to improve client knowledge regarding OHS, MRC, and EAP servicing.
● Market the aspects of the services such as: times for accessing services, services available, resources available, WCB information, and emergency care procedures.
● Increase diligence about WCB case management.
● Propose a redesign for the occupational health facility.

CONCLUSION
To remain competitive in the current economic market, client satisfaction is key to successful servicing. For occupational health services, gap analysis is a powerful

method with which to evaluate client satisfaction. The strengths of using the SERVQUAL instrument are that it identifies service quality gaps, provides suggestions for closing those gaps, and allows for service quality analysis. It has been well researched, clinically tested, and has good reliability and validity.

In terms of limitations, the instrument does not provide an opportunity for client commentary, may lack the sensitivity to pick up deficits in occupational health servicing, and tends to focus more on business aspects and less on human aspects of servicing. However, by adding "comment sections," as discussed in the above application, elicited client responses can be valuable for understanding the presence of problems and the nature of gaps identified.

In summary, gap analysis is an interesting technique that can be used to evaluate certain aspects of occupational health service quality. However, the process has limitations. Perhaps the best approach is to use a variety of tools for evaluation and refinement of health care services.

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IN SUMMARY

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Client Satisfaction Surveys.
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1. Measurement of client satisfaction is an important component of an effective occupational health service. The key to providing an effective health service is meeting or exceeding what clients expect from the service.

2. Gap analysis, a methodology for measuring service quality gaps, consists of identifying the type of gap(s) (1 through 5) that exist, preventing client satisfaction with the service(s) provided.

3. Although it has limitations, the SERVQUAL instrument is a valid and reliable tool that can be adapted to measure service quality gaps in occupational health services.