A Comparison of Nursing Home Residents' and Administrators' Judgement of Service Quality

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ABSTRACT

Because nursing home residents are generally confined to the facility, their quality of life is greatly influenced by the service quality of the facility. Since administrators are charged with assessing service quality, it is important their ideas about service quality are consistent with residents'. The SERVQUAL scale was used to study 207 nursing home residents' and 95 administrators' expectations, perceptions, and judgement of service quality. Administrators had significantly high expectations and perceptions of the level of service quality actually delivered. However, the measure of perceived service quality—the gap between perceptions and expectations—was greater for residents than administrators.

Nursing home administrators could determine the quality of life for one-third of the nation's population over 65: this is the proportion of the U.S. elderly population expected to reside in nursing homes sometime in their later lives. The elderly in long term care facilities generally spend 24 hours a day in the facility. Infrequently some of them will leave the nursing home to visit a doctor, to take a drive or eat a meal with a family member or friend, or to go on a "outing" with staff or volunteers. In this context the elderly are a "captive" population; thus, their quality of life is mainly determined by the quality of care found in the long term care facility.

The main designer and insurer of quality in the facility is the nursing home administrator. Administrators clearly understand what connotes excellent service quality to government regulators and professionals in the health care field because their ideas are promulgated in written standards governing nursing home operations. However, the administrators--or regulators for that matter--may not know what residents associated with excellent service quality in their nursing home. Their unawareness of what service attributes meet resident needs is not necessarily their fault since residents may not feel comfortable in expressing their ideas to an administrator on a one to one basis. Researchers have not been particularly helpful, either. With the exception of a recent study by Kleinsorge and Koenig (1991), there appears to be no published studies of residents' perceptions of service quality. Moreover, there are not studies comparing the quality expectations and perceptions held by nursing home residents and administrators. To the degree that there is a discrepancy in the expectations or perceptions of service quality between residents and
administrators, there is a likelihood that the quality of life of the elderly in the nursing home will suffer.

The purpose of this study is to measure and compare expectations and perceptions of service quality for two stakeholder groups in long term care: the providers and the residents. The research addresses the question: Are the expectations and evaluations of quality similar for administrators and residents? It is likely that quality of life for the residents will be enhanced if the two groups are in agreement regarding what constitutes service quality in a nursing home.

Background

This study conceptually and operationally defines the construct of service quality as perceived quality. Perceived quality is defined as an individual's judgement about overall excellence of the service (Zeithaml, 1987). This study uses the disconfirmation paradigm to determine quality. According to this model, expectations of a service must equal the perceived level of the service before a person judges the quality of the service satisfactory. Gaps in which expectations exceed perceptions is a judgement of poor service quality. Research suggests that when service providers and recipients of the service have different expectations and perceptions, there are service quality problems. (Mangold and Babakus, 1990, 1991; Swartz, 1989; Zeithaml and Parasuraman, 1988).

An important development in this area was attempts to measure service quality. Of particular note is SERVQUAL, a multiple-item scale designed to measure the degree and direction of the gap between expectations and perceptions. The conceptualization, development and validation of SERVQUAL is well documented (Parasuraman, Zeithaml, & Berry, 1984, 1985, 1986). While criticism of the instrument has been noted (Carman, 1990; Lewis, 1990), the usefulness of SERVQUAL has continued to be demonstrated (Kierl, 1990), especially in health care contexts (O'Conner, 1988; Reidenbach, 1990; Mangold & Babakus, 1990, 1991). The work by Mangold and Babakus (1991) is similar to the present study in its use of SERVQUAL to study the discrepancies between hospital patients' and service providers' expectations and perceptions regarding service quality. The findings showed both groups had similar expectations about what level of service would be provided. However, patients had more positive perceptions of the level
of service actually delivered. The gap score—the SERVQUAL measure of perceived quality—indicated that expectations of what the service should be exceeded perceptions of the level of service delivered in both the patient and provider groups. The gap was less pronounced in the patient group than in the provider groups. Since hospital and long term care differ dramatically in terms of characteristics, e.g. the temporary versus permanent nature of the respective contexts, it may be inappropriate to view the Mangold and Babakus study and the present study as "similar" in any way other than research design. Since health care contexts differ, it is important to investigate service quality across health care settings, including nursing homes.

Methodology

Sample. The sample for the present study consisted of 207 nursing home residents from 10 intermediate care facilities and 95 nursing home administrators. Residents were first screened on their cognitive ability to respond to the questionnaire. Nursing home staff performed the screening. From those residents considered able to respond, volunteers were sought by written invitation from the researchers. There were 159 females and 48 males. The average age of female residents was 80.7 and the average age of male residents was 75.9 and their average tenure in the nursing home was 4.3 years for females and 3.7 for males. The number of administrators from the 10 facilities was supplemented by administrators attending on-going education seminars.

Procedures. The test instrument was administered to the residents individually by trained interviewers. The instrument was mailed to administrators from the ten nursing homes. It was also given to administrators in group format at four meetings devoted to a statewide continuing education program. This allowed for a large enough sample of administrators. While a matched sample of administrators with their own homes would have been desirable from some standpoint, it would not have yielded a large enough sample.

Test instrument. The test instrument for the study was SERVQUAL. This instrument was developed to measure perceived service quality and has been validated using a number of services by Parasuraman, Zeithaml and Berry (1986). This is a 44 item Likert scale measuring five dimensions of service quality. The dimensions measured are:
1) Tangibles - physical facilities, equipment and appearance of employees

2) Reliability - ability to perform the required service dependably and accurately

3) Responsiveness - willingness to help customers and provide prompt service

4) Assurance - knowledge and courtesy of employees and their ability to inspire trust and confidence

5) Empathy - caring and individual attention provided by the staff.

Each respondent is required to answer 22 questions on a seven point Likert scale twice. The first set of 22 asks for perceptions of existing service quality of the five dimensions. The second set of 22 are identical in structure to the first, but ask for customer expectations of service quality. To avoid order bias, half the subjects assess perception of service first and expectations of service second. The other half of the subjects provide expectations first and perceptions second.

Within the SERVQUAL instrument, the first four items measure tangibles and the actual score used in the analysis is the mean of these four items. Likewise, the remaining four dimensions are measured with five, four, four and five items respectively and the mean of each is used in the analysis. The numerical measure of quality is defined as the difference between a respondent's perception of existing service quality and his/her expectation of service quality on each of the dimensions. This is referred to as the gap score. In addition to the five separate gap scores for the five dimensions, an overall service quality measure was created using the average of the five gap scores.

**Independent variables.** The purpose of this study was to assess the difference between quality perceptions of nursing home residents and those of administrators. Consequently, the only independent variable in the analysis was the status of the respondent: resident or administrator.

**Dependent variables.** There were three sets of five dependent variables to be analyzed in the study. The first set of five consisted of the expectations of the respondents for each of the five dimensions of the SERVQUAL instrument. The second set of five consisted of respondents' perception of existing services on the five dimensions.
The final six dependent variables were to be evaluated for the gap between perception and expectation, or the perception of quality as defined above. They were the five separate dimensions of service quality evaluated by the SERVQUAL as described above and the overall measure of service quality reflected in the means of the five dimensions of the SERVQUAL instrument. The numerical value of each of these dependent variables was computed as the difference between the respondents' perceptions of the level of service quality and their expectations of the level of quality that should be supplied by the institution. Thus, it is the gap between perceptions and expectations that is the dependent variable for each of these dimensions.

Analysis. Since the independent variable in the study, status of the respondent, was nominal scaled and the method of measurement in the SERVQUAL instrument implies interval scaled dependent variables, the method of analysis chosen was Analysis of Variance (ANOVA). (It should be noted that the results of this test are equivalent to the t-test for two independent samples sometimes used in SERVQUAL studies.) A separate ANOVA was completed for each of the 16 dependent variables, the five dimensions of the SERVQUAL instrument for expectations, perceptions, the gap between the two, and the overall measure of quality.

Results. For expectations, results of the ANOVAs indicate statistically significant differences between residents and administrators for each of the five dependent variables. For tangibles, the p-value was .005 and the means for administrators and residents respectively were 6.38 and 6.11. For the reliability variable the p-value was .004 with means of 6.57 and 6.33 for the administrators and residents respectively. For the responsiveness variable the p-value was .002 and the means were 6.29 and 5.97 with the higher expectation in the administrator group as before. For the assurance variable the p-value was .001 and the administrator scores were again higher than resident scores with means of 6.84 and 6.34 respectively. Similar results were found for the empathy dependent variable. Administrator mean score was 6.42 while the resident mean score was 5.98. The p-value for the difference was again significant at .001.

For perceptions of the existing level of services on the five SERVQUAL dimensions, the results were similar to those of expectations. With one exception, the differences between
administrators' perceptions of the level of service and residents' perceptions were significantly with administrators reporting higher levels of service quality being delivered. The exception was perception of tangibles which showed no significant difference in the means: the p-value was 0.28. In each of the other four variables the p-value was less than 0.001. The administrators' and residents' means which were significantly different were, respectively, as follows: for reliability, 5.98 and 5.28; for responsiveness, 5.89 and 4.96; for assurance, 6.08 and 5.52; and for empathy, 6.16 and 5.37.

The final set of six analyses were for the gap (the difference) between perceptions and expectations on the part of administrators and residents. It should be recalled that this is the measure of perceived quality as defined by the SERVQUAL instrument. A negative gap score indicates that the level of service actually delivered did not meet the expectations for that service dimension.

The results of the analysis for the dependent variable, Tangibles, was not significant at traditional levels. The p-value in the analysis was 0.18. The means for the two levels of the independent variable were -0.9 and -0.75 respectively for administrators and residents.

For the dependent variable, Reliability, the p-value in the analysis was 0.001. In this case the mean score for residents was significantly higher than the mean score for administrators with means of -1.05 and -0.65 respectively.

For the Responsiveness dependent variable, the analysis resulted in a p-value of 0.001 again indicating significant differences between perceptions of administrators and those of residents. Once again, the mean score was higher for residents than for administrators with means of -1.04 and -0.52 respectively.

For the Assurance variable, the p-value was 0.52 indicating that quality of care perceptions of administrators were not different than that of residents. Administrator's mean evaluation was -0.75 while that for residents was -0.82.
For the final dimension of the SERVQUAL instrument, Empathy, the analysis resulted in a p-value of 0.007 again indicating a significant difference between administrators and residents. The mean evaluation for administrators was -0.36 and that for residents was -0.67.

For the overall perception of quality of services rendered, the p-value was 0.02. Once again residents had higher overall gap scores than administrators with means of -0.87 and -0.64 respectively.

In summary, of the six dependent variables measuring the gap between perceptions and expectations, four resulted in statistically significant differences. The four significant variables were reliability, responsiveness, empathy and overall quality. The two that did not result in significant differences were tangibles and assurance.

Discussion

Expectations. The results show a consistent pattern across the five SERVQUAL variables. Significant differences between administrators and nursing home residents point to residents' lower expectations for material resources as well as for staff reliability, responsiveness, assurance, and empathy. One explanation might point to the relatively high expectations of administrators and be a positive index of concern for quality that exceeds that of residents. However, in conjunction with other results indicating residents' lower perceived quality, it seems more likely that these lower resident expectations are negative in connotation and reflect actual experience and relatively less satisfaction with service quality.

Perceptions. Again administrators were consistently more positive than residents in their judgements of the actual service quality delivered. Residents rate lower quality in reliability, responsiveness, assurance and empathy. The exception is that no significant difference is found between residents and administrators on tangibles; physical facilities and equipment are rated similarly. This is an interesting and possibly confirmatory finding since there is probably less likelihood of perceptual differences in tangible/observable and measurable areas of care. The lack of differences in this variable might accentuate and confirm differences found in other service quality variables. While administrators have daily access to equipment, budgeting, and purchasing
(tangibles), they frequently have little contact with patients or patient care—thus the discrepant perceptions.

**Quality of Care.** Perceived quality of care was defined as the 'gap,' or lack of congruence, between expectations and judgements of actual service quality. Thus quality is a relative measure; perceived quality can exist alongside poor achievement if expectations are low.

On perceived quality of care variables administrators' and residents' differences are less consistent. On the tangibles scale these were no differences between administrators and residents. While residents expect less in material resources than administrators, they do not perceive less and are as satisfied in this area as the administrators. Also, residents and administrators seem to judge the assurance variable similarly. While earlier data suggest that residents both expect and perceive less than administrators in terms of the quality assurance variable, their gap scores indicate no less satisfaction with the staff assurance variable than administrators. This results clearly accentuates the relative meaning of the perceived quality or gap scores on the SERVQUAL instrument. It might be pointed out that the results also question the practical usefulness of the gap score as a measure of quality. Metaphorically, while the peasant might be as satisfied with a bowl of soup as the king is with a royal banquet, such relative satisfaction can be clearly overrated! Absolute quality must remain of central concern in the health and social service context. While the relative gap score is associated with "customer satisfaction" in the general marketplace, absolute quality will be a better guide to needed services in the health care domain. While it might be judged permissible to produce an inferior but acceptable item of merchandise, this will hardly be true of health and human service.

On staff reliability, responsiveness and empathy, residents had significantly larger gap scores than administrators. This pattern of results is supported by the overall gap score averaging all 5 SERVQUAL variable gap scores; residents indicated a significantly greater discrepancy between the expected and achieved than administrators. This result conforms to a general pattern and points to a need to focus on service quality from a resident's perspective.
The findings reported for this study are in striking contrast to those of the Mangold and Babakus (1991) study cited earlier where hospital patients had similar expectations but had higher perceived quality scores than administrators. This contrast is very meaningful in light of the sharp differences between acute and long term health care. Acute care hospitals and nursing homes are very different in setting, length of stay, type of patient, problem types and in the stage of development in the health care domain. Keeping satisfied consumers is a very different proposition when average length of stay is 5 years versus 5 days; where patients are suffering from chronic versus acute illness; where the physical environment is permanent versus temporary. In addition to these inevitable systematic differences is health care systems, difference in perceived service quality might also relate to the industry's stage of development. Long term care is a relatively recent new comer within the major health care system. Acute care hospitals have been better staffed with physicians and professional nurses. Hospital administration is a considerably more developed profession than nursing home administration and requires more advanced training, certification and credentials. So, for reasons relating to the nature of long term care and also the development stage the industry, perceived service quality will be a challenging issue for administrators and researchers. This study suggests areas in which the challenge can be addressed. Furthermore, while it demonstrates the applicability of the SERVQUAL instrument to long term health care, it also calls into question the usefulness of the relative quality measures.

References


