Marketing of Health Care Within a Community: A Quality-of-Life/Needs Assessment Model and Method

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A community-based health-care assessment model and method are presented. The model and method are based on theoretical notion that community residents' satisfaction with individual health-care programs and services available within their community affect their satisfaction with the community health-care system. Examples of individual health-care services and programs include: drug abuse programs, cancer health services, children health services, diabetes services, elderly health programs, emergency health services, physical fitness programs, heart health programs, home health services, mental health services, in-patient hospital services, obstetrics services, out-patient services, physical rehabilitation services, and women's health programs. In turn, satisfaction with over-all community health care affects perceived quality of life (over-all life satisfaction) through satisfaction with the community at large and satisfaction with personal health. Data were collected in the Mid-Atlantic area of the United States through a mail survey. One-hundred and forty-seven community residents completed the survey. The results were supportive of the model and provided validational support to the assessment method. Managerial implications of the model and its application are also discussed. J BUSN RES 2000. 48:165–176. © 2000 Elsevier Science Inc. All rights reserved.

Currently, the U.S. health-care system is, by far, the most expensive in the world. Latest available figures from 1994 show that the country spent, on average, over $3,510 per person on health care (U.S. Government Statistics, 1996). This figure far exceeds the amount spent per capita by any other country in the world. In 1990, according to government sources, the nation spent $662.2 billion on its health care. The figure is approximately 10.5% higher than it was just 3 years before in 1987. In 1994, over $949 billion was spent. The 1994 data show that those costs were spread over a variety of programs and services that were offered by the health-care industry. Four health-care delivery areas—Medicare ($166.1 billion), hospital care ($338.5 billion), nursing home care ($72.3 billion), and physician services ($189.4 billion)—made up the bulk of those expenditures (U.S. Government Statistics for 1994 reported in Boston Globe, May 1996). If we project that rate of growth out past the end of the decade, the costs are staggering.

The reasons behind this explosive dollar growth in the United States' health care are multiple. Two of the more important reasons are briefly touched on here. These are: (1) the aging population; and (2) the competitive dynamics of the industry itself.

First, the country has seen its population age significantly. As a function of this aging population, more and more money will be applied toward health-related products and services (Gradison, 1991; Garland, 1991; Spotts and Schewe, 1989). As White-Means (1988) points out, the elderly spend a larger and larger portion of their disposable income on health care as they begin to experience declining personal health. Studies by Meadow (1983), Rahtz, Sirgy, and Meadow (1989) and others (e.g., Andrews and Withey 1976) have shown the value of the health-care system in contributing to the over-all quality of life (QOL) for individuals, especially the elderly. Consequently, from a public policy perspective, the health-care domain will continue to grow in importance to the society as the population continues to age.

Second, the competitive structure and nature of the health-care industry have contributed to the spiraling dollar increase in delivery of care. Although traditional economic theory suggests that competition drives prices down, this does not seem to be the case in the health-care industry. Its unique structure of third-party payers, government regulation and programs, litigation, and multiple providers with a variety of high-cost asset product/service portfolios make traditional market theories ineffective in application and planning.

Given the current state of affairs in the health-care environment, it has become a major target for reformers from the government and from within the industry itself. With the 1996
presidential campaign, as with the 1992 campaign, health-care reform was a major election issue. Although nothing has yet to be executed, the Clinton administration and the Republican Congress have unveiled a variety of proposals for overhaul of the system. A key part of many of these proposals seem to suggest that health-care industry leaders should rely on a community-based managed competition system in lieu of the traditional market competition-based system that has dominated the industry for decades.

Under such a community-based managed competition system, the performance measures for a health-care provider can be expected to change dramatically. Market share and other traditional competition-based measures will not be sufficient indicators of meeting consumer demand and providing necessary services. The government can be expected to continue to week assurances that the over-all quality of health care for the community is being met at minimal cost; that is, that the health-care needs of the community are being met. In such a setting, we would expect to see an increased use of consumer assessments (e.g., Davies and Ware, 1988) as a way in which the "value" of the individual and total community health-care systems' contribution to the community QOL can be monitored over time.

**Purpose of this Paper**

If health-care and public policy officials are to be able to measure performance in this new environment, it is essential that such measurement is guided by a theoretical model designed to reflect the new emphasis on community-based managed competition systems. The purpose of this paper is to present and test a model of community health-care satisfaction. The current model is designed to provide health-care and public policy officials with the ability to conceptualize and measure effective health-care delivery performance by a given health-care system in relation to the over-all community the system serves.

**Community Health-Care Satisfaction: An Integrated Quality-of-Life (QOL) Model for the Health-Care Industry**

In any strategic planning situation, it is important that managers use theoretical models to guide them in conceptualizing, strategizing, implementing, and monitoring their product/marketing mix offerings. This is especially true for many health-care organizations whose portfolios contain a wide variety of health-care programs and services. Figure 1 is a diagram of such a model.

The use of such a model provides decision makers with a specific framework in which they can measure the extent to which specific health-care services and programs can significantly contribute to enhancing the quality of life (QOL) of the community. In other words, the model allows health-care managers to partial out the various components of the health-care system portfolio and assess their individual value and contribution to community residents' well-being.

**Community Health-Care Satisfaction**

Community health-care satisfaction refers to an over-all or global satisfaction a person may feel toward the general health-care environment in their community. This assessment can be assumed to be a function of the person's perception of a variety of general health-care programs and services in the community. These programs or services may include: alcohol and drug abuse programs, inpatient hospital care, outpatient hospital care, and elderly health services, among others.

**Antecedents of Community Health-Care Satisfaction**

On the left side of the model's diagram are the health system's potential and actual offerings within a given community. These identified offerings are then used by community residents to assess their over-all satisfaction with health care (community health-care satisfaction). Their over-all satisfaction is postulated to be determined by the sum of the satisfaction with those health-care programs and services residents perceive as available within the community. In a formula representation that relationship can be expressed as (Equation 1):

\[
CHCS = \sum S_i
\]

where: CHCS = community health-care satisfaction; \(S_i\) = satisfaction with individual health-care program or service (e.g., alcohol and drug abuse programs), where \(i = 1, 2, 3, 4, \ldots, n\).

Most multi-attribute attitude models use the same logic in predicting and explaining attitude (Fishbein and Ajzen, 1975; Wilkie and Pessemier, 1973). That is, a consumer's attitude toward community health care is a direct function of the sum of a consumer's evaluations of each health-care program or service perceived available in the community. The concept of evaluation can be easily equated with satisfaction. Satisfaction researchers have long argued this case (e.g., Aiello, Czepiel, and Rosenberg, 1977).

Past research has shown that individual health-care programs or services can affect over-all satisfaction of community health care. Sirgy, Hansen, and Littlefield (1994) have argued and empirically demonstrated that hospital satisfaction can significantly affect community health-care satisfaction. Furthermore, consumer satisfactions with individual health-care programs and services have long been considered as valid indicators of the quality of care and have received wide support for such use in the literature (e.g., Davies and Ware, 1988).

**H1:** Community health-care satisfaction is a direct function of the sum of satisfactions with various health-care programs and services perceived available in the community.
What must be recognized is that these health-care services and programs may be those that are actually, or potentially, provided by one or more health-care provider(s) in the community. In other words, consumers are likely to express dissatisfaction with a particular health-care program or a service available (or lacking) in the community. Hence, the list of programs and services that can be included in a community health-care assessment instrument does not have to be restricted to actual community offerings. Potential health-care programs and services can and should be included in the...
assessment survey. In addition, programs and services can also be added or subtracted from the assessment instrument to remain consistent with any health-care system's real or anticipated portfolio change.

Consequences of Community Health-Care Satisfaction

As can be seen from Figure 1, the model clearly recognizes that there are numerous domains that contribute to the well-being of community residents. The health-care domain is but one of many. If health-care managers are to make claims that their systems have contributed "significantly" to community residents' well-being, it is crucial that these other domains' influences be recognized and accounted for in any measurement of that individual health-care system's contribution.

The model posits that community health-care satisfaction affects life satisfaction through the mediating effects of community satisfaction and personal health satisfaction. That is, community health-care satisfaction affects community satisfaction and personal health satisfaction; these, in turn, affect life satisfaction.

Suggestive evidence of these relationships come from studies conducted by Meadow (1983), Rahtz, Sirgy, and Meadow (1989), Sirgy, Mentzer, Rahtz, and Meadow (1991), Sirgy, Rahtz, Meadow, and Littlefield (1995), and Sirgy, Hansen, and Littlefield (1994). Specifically, Meadow (1988) developed a consumer well-being (satisfaction) measure and correlated it to life satisfaction measures among elderly consumers. Satisfaction with medical care (health care) was one of the consumer domains in the measure. This measure was a composite of satisfaction ratings with hospitals, doctors/dentists, drug stores, and counseling services. The results showed a more significant relationship between satisfaction with medical care institutions found in the community and life satisfaction than between satisfaction with other domains (such as food services, housing) and life satisfaction. Such a findings supports the notion that community health-care satisfaction plays a significant role in perceived QOL (or life satisfaction).

Rahtz, Sirgy, and Meadow (1989) explored the effects of moderating factors (such as personal health satisfaction) on the relationship between community health-care satisfaction and life satisfaction. The study revealed a stronger relationship between community health-care satisfaction and life satisfaction when personal health is perceived as poor (as compared to good).

Sirgy, Mentzer, Rahtz, and Meadow (1991) conducted a follow-up study to assess further the relationship and to explore the moderating role of personal health satisfaction (and cognitive age) on the relationship. Overall, results indicated that community health satisfaction is positively related to life satisfaction, as expected. Personal health satisfaction was found to relate to life satisfaction directly and independently of community health-care satisfaction. Taken in combination, these results suggest that community health-care satisfaction affects life satisfaction through the mediating effects of personal health satisfaction.

The moderating versus mediating effects of personal health satisfaction on the relationship between community health-care satisfaction and life satisfaction was further explored (Sirgy, Rahtz, Meadow, and Littlefield, 1995). Support was provided for the mediating effect of personal health satisfaction given a general population (elderly and nonelderly consumers). The same results also suggested that personal health satisfaction may play a moderating role on the relationship between community health-care satisfaction and life satisfaction, however, only for elderly consumers. Sirgy, Hansen, and Littlefield (1994) demonstrated that hospital satisfaction affects life satisfaction through community health-care satisfaction and personal health satisfaction. These results, in total, give strength to the argument that community health-care satisfaction may affect life satisfaction through personal health satisfaction.

The theoretical logic used in this particular model and by researchers in this area (e.g., Rahtz, Sirgy, Meadow, 1989) is grounded in QOL theory (Andrews and Withey, 1976; Campbell, Converse, and Rodgers, 1976; Meadow, 1988). The basic premise is that life satisfaction is functionally related to satisfaction with all of life's domains and subdomains. That is, life satisfaction is influenced by lower levels of life concerns and evaluations within. Thus, the greater the satisfaction with such concerns as personal health, work, family, and leisure, the greater the satisfaction with life in general. In other words, life satisfaction is determined by satisfaction with the mix of an individual's major life domains.

The affect within a life domain spills over vertically to the most superordinate domain (life in general), thus determining life satisfaction. Satisfaction with a given life domain is determined by satisfaction with life conditions or concerns making up that domain. For example, satisfaction with personal health (life domain) is determined by satisfaction with community health-care satisfaction and one's efforts to eat nutritionally, exercise regularly, drink in moderation, practice safe sex, and so forth.

A person's evaluation of these factors can be viewed as satisfaction/dissatisfaction with life conditions or concerns within the domain of personal health. Within a given life condition or concern (such as community health care), satisfaction with that life condition or concern is affected by satisfaction with the subconditions (or subconcerns) embedded within it. For example, community health-care satisfaction is likely to be determined by satisfaction with the various health-care programs and services perceived available in the community (e.g., alcohol and drug abuse programs, elderly health services, home health services, inpatient hospital services, outpatient hospital services, outpatient hospital services). These are subconditions/subconcerns embedded hierarchically within
the life condition/concern of community health care. The extent to which satisfaction within a subdomain affects satisfaction of a superordinate domain in the hierarchy of psychological domains has been referred to in the QOL literature (e.g., Diener, 1984) as the bottom-up spillover effect.

Based on the same theoretical rationale, the following hypotheses were developed to articulate the consequences of community health-care satisfaction.

H2: Personal health satisfaction is a direct function of community health-care satisfaction.

H3: Community satisfaction is a direct function of community health-care satisfaction.

H4: Life satisfaction is a direct function of personal health satisfaction, community satisfaction, job satisfaction, and family satisfaction.

Method

Sampling

The study was conducted in three phases. Phase One consisted of six personal interviews with community health-care executives from the two “full-service portfolio” regional health-care providers in the study area. This was done to identify the types of health-care programs and services available in the community. From these interviews, and the literature, the initial survey instrument was developed. The last two phases involved were a survey (telephone and mail) of individuals from the community. Given the paper’s focus and because the first phase was simply to identify appropriate elements for inclusion in the instrument and gain managerial comments about the process, only the last two phases are explained in more detail below.

Phase Two was as a telephone screening survey conducted to generate a group of 250 respondents for use in Phase Three. To generate the 250 for the later sample, 304 individuals were contacted using a systematic random sampling procedure from the area telephone book. In the 5-minute telephone survey, resident’s were asked demographics and a few questions about the quality of the area’s health care. At the end of that survey, respondents were asked if they would be willing to participate in a much more detailed mail survey study concerning health-care offerings in the community. As an incentive, they were told they would be entered into a drawing for a $150.00 cash prize.

The instrument used in Phase Three was pretested on a small sample of six women from the population of interest in a controlled setting. Discussions following the administration of the instrument were used to adjust wording and layout. The revised instrument was then mailed to the 250 individuals who had expressed a willingness to participate. One hundred and fifty-two questionnaires were returned, 147 of them contained usable data. This translated into a 59% response rate for the mail survey portion of the study. In terms of the overall return from the 304 initial contacts, the response rate was still a strong 48%.

Analysis of the sample demographics revealed that the majority of respondents were white married women with full-time jobs, having at least two children, with a high school education or some college. It should be noted that the validity of the proposed assessment method does not depend upon the external validity (e.g., sample representativeness) of the study. The validity of the method hinges on testing the hypothesized relationship of the model, hence internal validity aspects of the study should be considered more important than external validity.

Measures

Satisfaction with community health-care programs and services (alcohol and drug abuse, cancer, children health, diabetes, elderly health, emergency health, physical fitness, heart disease, home health, inpatient hospital, mental health, outpatient, physical rehabilitation, and women health) was measured using a multiplicative index involving four components. These components were: (1) satisfaction with the quality of the community health-care service/program in question (e.g., elderly health services and programs in the community); (2) perceived importance of the health-care service/program in question within the community; (3) past use of the health-care service/program in question within the community; and (4) knowledge of available health-care service/program in question in the community (Equation 2).

\[
S = Q \times I \times U \times K
\]  
(2)

where: \( S \) = satisfaction with the community health-care program/service in question; \( Q \) = satisfaction with quality of the community health-care program/service in question; \( I \) = perceived importance of the health-care service/program in question within the community; \( U \) = past use of the health-care program/service in question within the community; and, \( K \) = knowledge of the availability of the health-care service/program in question in the community.

Satisfaction with the quality of the health-care services/programs in question (e.g., elderly health services and programs in the community) was measured by responses to the following question: “How satisfied are you with the quality of this health care service in the community?” Responses were tapped on a scale involving five categories, “very satisfied,” “satisfied,” “somewhat satisfied,” “not very,” and “not at all.” “Very satisfied” responses were coded as +2, “satisfied” as +1, “somewhat satisfied” as −1, “not very” as −2, and “not at all” as −3.

Perceived importance of the health-care service/program in question was measured by responses to the following question: “How important is this ________ (name of the health-care program or service) to the community?” Responses were
tapped on a scale involving five categories, “very important,” “important,” “somewhat important,” “not very,” and “not at all.” “Very important” responses were coded as 1.0, “important” as 0.8, “somewhat important” as 0.6, “not very” as 0.4, and “not at all” as 0.2.

Past use of the health-care service/program in question was measured by responses to the following response cue: “Concerning the use of _______ (name of the health-care program or service).” This statement was followed by four response categories: “I have used” (coded as 1.0), “A family member has used” (coded as 0.85), “A friend has used” (coded as 0.5), “I do not know of anyone who used this service” (coded as 0.25).

Knowledge of the availability of the health-care service/program in question was measured by responses to the following question: “How much knowledge about available _______ (name of the health-care program or service) would you say you have?” Responses were tapped on a scale involving five categories, “a large amount,” “a fair amount,” “some,” “very little,” and “none.” “A large amount” responses were coded as 1.0, “a fair amount” as 0.8, “some” as 0.6, “very little” as 0.4, and “none” as 0.2.

The theoretical rationale for the measures comprising the satisfaction index (satisfaction with quality, perceived importance, past use, and knowledge) was based on the logic of multi-attribute attitude models (e.g., Wilkie and Pessemier, 1973). Satisfaction researchers have used the same logic to conceptualize the determinants of consumer satisfaction (e.g., Aiello, Czepiel, and Rosenberg, 1977). That is, satisfaction with a good or service is determined by the satisfaction of the good or service attributes such as quality and price, moderated by the perceived importance of these attributes. In the current satisfaction index, focus was on only quality of the health-care service in question, because price is often not perceived as a decision criterion in health care. This is because most consumers usually buy health-care services through a third party (health-care insurance, Medicaid, Medicare, etc.).

Because the focus here is to predict community health-care satisfaction, not over-all satisfaction with an individual health-care component, the perceived importance was construed and measured at a higher level of analysis (the health-care service/program in question instead of the attribute level). That is, perceived importance was measured by asking the respondent the importance of the health-care service/program in question in relation to other health-care programs and services within the community.

In addition to perceived importance, it was expected that satisfaction with the quality of a health-care service/program would be moderated by the extent of the consumer’s use of the health-care service/program in question, as well as consumer’s knowledge of the availability of the service/program in question. The greater the use of the service or program in question, the more intense the satisfaction with the quality of the service or program. Similarly, the greater the knowledge of the availability of the service or program in question, the more intense is the resultant satisfaction.

Community health-care satisfaction was measured by responses to the following question: “In general, how satisfied are you with the over-all quality of the health-care available in this area?” Responses were recorded using the delighted–terrible scale popular in quality-of-life studies (e.g., Andrews and Withey, 1976). The specific categories are: “delighted” (coded as 7), “pleased” (coded as 6), “mostly satisfied” (coded as 5), “mixed or equally satisfied and dissatisfied” (coded as 4), “mostly dissatisfied” (coded as 3), “unhappy” (coded as 2), “terrible” (coded as 1), “neutral or neither satisfied nor dissatisfied” (coded as missing data), and “never thought about it” (coded as missing data). The delighted–terrible scale has been used successfully to measure a variety of domain-specific satisfaction (e.g., Andrews and Withey, 1976; Rahtz, Sirgy, and Meadow, 1989; Sirgy, Mentzer, Rahtz, and Meadow, 1991; Sirgy, Rahtz, Meadow, and Littlefield, 1995; Sirgy, Hansen, and Littlefield, 1994).

Similarly, community satisfaction, personal health satisfaction, job satisfaction, family satisfaction, and life satisfaction were all measured using the delighted–terrible scale. Specifically, community satisfaction was measured by responses to the following question: “Over-all, how satisfied are you with the community in which you live?” Personal health satisfaction was measured by responses to the following question: “Over-all, how do you feel about your personal health at this time?” Job satisfaction was measured by responses to the following question: “Over-all, how satisfied are you in general with your job?” Family satisfaction was measured by responses to the following question: “Over-all, how satisfied are you with your family?” Finally, life satisfaction was measured by responses to the following question: “Over-all, how satisfied are you with your life?”

Procedural Details in Survey Administration

The survey questionnaire was titled “Your Opinions on Community Health Care.” The following instructions were provided at the beginning of the questionnaire. “This questionnaire seeks to gain a better understanding of Peninsula resident’s opinions about the local health-care service. When answering, please be as truthful as possible. Your answers will help in designing better health-care programs for your community.”

The measure for community health-care satisfaction was placed at the beginning of the questionnaire, followed by the measures pertaining to personal health satisfaction, community satisfaction, job satisfaction, family satisfaction, and life satisfaction. Between these questions were filler questions designed to reduce response bias. Questions pertaining to ratings of physical health along a variety of dimensions were used as fillers.

The following portion of the questionnaire involved the community health-care components (women’s health services,
Table 1. Correlation Matrix and Descriptive Statistics

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<tbody>
<tr>
<td>Life satisfaction</td>
<td>1</td>
<td>0.335</td>
<td>0.339</td>
<td>0.368</td>
<td>0.782</td>
<td>-0.030</td>
<td>0.155</td>
<td>1.026</td>
</tr>
<tr>
<td>Com. satisfaction</td>
<td>1</td>
<td>0.125</td>
<td>0.260</td>
<td>0.168</td>
<td>0.182</td>
<td>0.182</td>
<td>0.200</td>
<td>1.102</td>
</tr>
<tr>
<td>Pers. health satisfaction</td>
<td>1</td>
<td>0.204</td>
<td></td>
<td>0.366</td>
<td>0.172</td>
<td>-0.005</td>
<td>0.092</td>
<td>1.205</td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>1</td>
<td>0.327</td>
<td></td>
<td></td>
<td>-0.114</td>
<td>0.061</td>
<td>1.218</td>
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</tr>
<tr>
<td>Family satisfaction</td>
<td>1</td>
<td>-0.114</td>
<td></td>
<td></td>
<td>1</td>
<td>0.424</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Com. hc satisfaction</td>
<td>1</td>
<td></td>
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<td></td>
<td>1</td>
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<td>4.237</td>
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The Effect of Satisfaction with Various Community Health-Care Components on Over-all Community Health-Care Satisfaction

It was hypothesized that community health-care satisfaction was a direct function of the sum of satisfaction with the various community health-care services (H1). The Lisrel results were mostly supportive of this hypothesis. The sum of satisfaction of the various health-care services was found to be a significant predictor of community health-care satisfaction. The regression estimate was 0.10 (p < 0.01) accounting for 18% of the variance (with an error variance of 0.82).

The Effect of Community Health-Care Satisfaction on Personal Health Satisfaction

Personal health satisfaction was hypothesized to be a direct function of community health-care satisfaction (H2). The Lisrel results provided support for this hypothesis. The regression estimate was 0.22 (p < 0.01). Also, based on the modified model, family satisfaction was found to be another significant predictor of personal health satisfaction. The regression estimate of family satisfaction was 0.33 (p < 0.01). Both predictors accounted for 20% of the variance in personal health satisfaction (error variance was 0.85).

The Effect of Community Health-Care Satisfaction on Community Satisfaction

It was hypothesized that community satisfaction was a direct function of community health-care satisfaction (H3). The Lisrel results provided support for this hypothesis. The regres-
Figure 2. Modified health-care services model.
Discussion

The results of this study provided validation support to the proposed community health-care assessment method. The data demonstrated that it is possible to measure consumer satisfaction with individual health-care programs and services in a community QOL context. That is, consumer satisfaction can be measured effectively in a manner linking satisfaction with individual health-care programs and services to community residents' satisfaction with community health care at large, their personal health, community, and over-all life.

Our proposed measure of consumer satisfaction with individual health-care programs and services involves the sum of the satisfaction with the various health-care programs/services and in which satisfaction with an individual health-care program/service is captured in terms of the multiplicative product of four subconstructs: (1) satisfaction with the quality of the community health-care program/service in question; (2) perceived importance of the health-care program/service in question; (3) past use of the health-care program/service in question within the community; and (4) knowledge of the availability of the health-care program/service in question in the community. It has been argued that this measure of consumer satisfaction with individual health-care programs and services in a given community is an effective measure capable of measuring consumer satisfaction in relation to community QOL. The results of this study demonstrated that, indeed, the proposed measure of consumer satisfaction with individual health-care programs and services is nomologically related to community health-care satisfaction. This assessment method is consistent with the logic of other subjective well-being measures such as Meadow's (1983) measure. Meadow developed a consumer well-being measure that uses the same theoretical logic that is used here as a proposed measure. Meadow's argument is that over-all consumer well-being can be captured by the sum of consumer satisfaction with various retail institutions within one's community (e.g., stores, restaurants, banks, medical facilities). Over-all satisfaction with each type retail institution was captured by the multiplicative product of (1) perception of quality service from that institution; (2) perceived importance of that particular retail institution in relation to others; and (3) extent of use and familiarity with that retail institution.

Consistent with that argument, it was assumed that community health-care satisfaction is related to both satisfaction with the community at large and one's personal health. The results of the current study provided support for this hypothesis, thereby providing additional validation support for the proposed community health-care assessment measure. The study results are also consistent with past studies that have shown a link between community health-care satisfaction and satisfaction with personal health and community at large (e.g., Rahtz, Sirgy, and Meadow, 1989; Sirgy, Mentzer, Rahtz, and Meadow, 1991; Sirgy, Rahtz, Meadow, and Littlefield, 1995; Sirgy, Hansen, and Littlefield, 1994).

It should be noted, however, that the results of the current research indicate that personal health satisfaction is not only predicted by community health-care satisfaction but also by family satisfaction. Furthermore, the results indicate that community satisfaction is not only predicted by community health-care satisfaction but also by job satisfaction. An explanation for the effect of family satisfaction on personal health satisfaction may involve the notion of domain salience and spillover of affect from salient domains. It can be argued that the family life domain is highly salient in the minds of most people (especially married women with children, who comprised the majority of the respondents in this study). Emotional states reflecting satisfaction or dissatisfaction are likely to spill over to the personal health domain. Specifically, intense states of dissatisfaction with family life are likely to manifest in such physical ailments as sleep disorders, overeating, depression, smoking and related illnesses, and drug and alcohol abuse. Conversely, happiness in family life can positively affect personal health by encouraging a person to exercise regularly and engage in low-risk behaviors (e.g., safe sex, driving safely, getting regular physical exams).

The effect of job satisfaction on community satisfaction can be explained by the likelihood that the two are highly contingent upon one another. This is especially true if an individual's job is either in the same, or in close proximity to the city of residence. A person dissatisfied with his or her job is likely to feel motivated to move out of the community to find a better job. To maintain cognitive consonance (and to reduce dissonance), feelings of job dissatisfaction are likely to lead to feelings of dissatisfaction with the community. The converse of this may also be true.

Furthermore, it can be argued that community satisfaction and personal health satisfaction are likely to impact over-
all life satisfaction, in addition to satisfaction with other life domains (e.g., job and family). The results of this study provided support for this hypothesis, thus providing additional validation support for our proposed community health-care assessment measure. The study results are also consistent with QOL studies that have shown a link between satisfaction with individual life domains and overall life satisfaction (e.g., Andrew and Withey, 1976; Campbell, Converse, and Rodgers, 1976).

Managerial Implications: Model Application

This study provided validation support for the community health-care assessment method described in this paper. The composite index involving the sum of satisfaction with the various health-care services was shown to be predictive of community health-care satisfaction, which, in turn, was shown to be predictive of community satisfaction, personal health satisfaction, and life satisfaction. Consequently, the proposed assessment method may be considered to have validity.

Two questions, therefore, are related to the value of applying the model: (1) Can the method be used effectively by health-care providers and public health officials to assess the health-care needs of a specific community in a manner related to the overall life satisfaction of the community residents? and (2) Can health-care providers and public policy officials use this assessment method as a tool to enhance the quality of life of community residents through better focused health-care portfolio allocations? A demonstration based on the results of the Mid-Atlantic sample is the most parsimonious way to provide the answers. Table 2 shows means and standard deviations of measures of satisfaction with individual health-care services.

Table 2. Means and Standard Deviations of Measures of Satisfaction With Individual Health-Care Services

<table>
<thead>
<tr>
<th>Health-Care Program/Svc.</th>
<th>Satisfaction w/Quality</th>
<th>Perceived Importance</th>
<th>Extent of Use</th>
<th>Degree of Knowledge</th>
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<tbody>
<tr>
<td>Women's health</td>
<td>0.57 (1.22)</td>
<td>0.95 (0.11)</td>
<td>0.85 (0.25)</td>
<td>0.72 (0.19)</td>
</tr>
<tr>
<td>Children's health</td>
<td>0.68 (1.13)</td>
<td>0.97 (7.54E-02)</td>
<td>0.75 (0.31)</td>
<td>0.68 (0.21)</td>
</tr>
<tr>
<td>Elderly health</td>
<td>-9.09E-02 (1.27)</td>
<td>0.91 (0.14)</td>
<td>0.52 (0.27)</td>
<td>0.57 (0.21)</td>
</tr>
<tr>
<td>Physical fitness</td>
<td>0.28 (1.25)</td>
<td>0.84 (0.16)</td>
<td>0.61 (0.30)</td>
<td>0.67 (0.19)</td>
</tr>
<tr>
<td>Outpatient</td>
<td>0.82 (1.11)</td>
<td>0.94 (0.11)</td>
<td>0.83 (0.24)</td>
<td>0.72 (0.18)</td>
</tr>
<tr>
<td>Cancer</td>
<td>0.34 (1.13)</td>
<td>0.95 (0.11)</td>
<td>0.47 (0.25)</td>
<td>0.61 (0.21)</td>
</tr>
<tr>
<td>Alcohol/drug abuse</td>
<td>-7.07E-02 (1.3)</td>
<td>0.90 (0.14)</td>
<td>0.40 (0.22)</td>
<td>0.58 (0.20)</td>
</tr>
<tr>
<td>Heart disease</td>
<td>0.66 (1.15)</td>
<td>0.94 (0.10)</td>
<td>0.59 (0.29)</td>
<td>0.63 (0.21)</td>
</tr>
<tr>
<td>Diabetes</td>
<td>0.28 (1.11)</td>
<td>0.89 (0.14)</td>
<td>0.42 (0.24)</td>
<td>0.53 (0.21)</td>
</tr>
<tr>
<td>Obstetrics</td>
<td>0.90 (0.99)</td>
<td>0.94 (0.10)</td>
<td>0.72 (0.29)</td>
<td>0.70 (0.21)</td>
</tr>
<tr>
<td>Physical rehab</td>
<td>0.41 (1.11)</td>
<td>0.88 (0.15)</td>
<td>0.49 (0.28)</td>
<td>0.55 (0.21)</td>
</tr>
<tr>
<td>Psychiatric/mental</td>
<td>0.11 (1.23)</td>
<td>0.89 (0.16)</td>
<td>0.46 (0.27)</td>
<td>0.59 (0.21)</td>
</tr>
<tr>
<td>Home health</td>
<td>0.17 (1.32)</td>
<td>0.87 (0.16)</td>
<td>0.42 (0.24)</td>
<td>0.54 (0.22)</td>
</tr>
<tr>
<td>Inpatient</td>
<td>0.39 (1.22)</td>
<td>0.91 (0.13)</td>
<td>0.69 (0.29)</td>
<td>0.67 (0.21)</td>
</tr>
<tr>
<td>Emergency</td>
<td>0.51 (1.28)</td>
<td>0.97 (8.66E-02)</td>
<td>0.71 (0.29)</td>
<td>0.70 (0.18)</td>
</tr>
</tbody>
</table>

Satisfaction = satisfaction with the quality of the health-care services/program. This was measured by responses to the following question: “How satisfied are you with the quality of this health-care service in the community?” Responses were tapped on a scale involving five categories, “very satisfied,” “satisfied,” “somewhat satisfied,” “not very satisfied,” and “not at all.” “Very satisfied” responses were coded as 1.0, “satisfied” as 0.8, “somewhat satisfied” as 0.6, “not very” as 0.4, and “not at all” as 0.2.

Importance = perceived importance of the health-care services/program. This was measured by responses to the following question: “How important is this (name of the health-care program or service) to the community?” Responses were tapped on a scale involving five categories, “very important,” “important,” “somewhat important,” “not very,” and “not at all.” “Very important” responses were coded as 1.0, “important” as 0.8, “somewhat important” as 0.6, “not very” as 0.4, and “not at all” as 0.2.

Use = past use of the health-care services/program. This was measured by responses to the following question: “Concerning the use of (name of the health-care program or service) — this statement was followed by four response categories: ‘I have used’ (coded as 1.0), ‘a family member has used’ (coded as 0.85), ‘a friend has used’ (coded as 0.5), I do not know of anyone who used this service’ (coded as 0.25).

Knowledge = knowledge of the availability of the health-care services/program. This was measured by responses to the following question: “How much knowledge about available (name of the health-care program or service) would you say you have?” Responses were tapped on a scale involving five categories, “a large amount,” “a fair amount,” “some,” “very little,” and “none.” “A large amount” responses were coded as 1.0, “a fair amount” as 0.8, “some” as 0.6, “very little” as 0.4, and “none” as 0.2.

Assessment and Application

The first question that should be posed is: Which health care services are lacking in quality in the community? Based upon these figures, we can see that most community residents report dissatisfaction with health-care programs and services related to elderly health (mean of satisfaction w/quality = -9.07E-02), alcohol and drug abuse (mean of satisfaction w/quality = -7.09E-02), and home health (mean of satisfaction w/quality = -0.17). However, it should be noted that there is a disparity of opinions regarding residents’ perception of quality of these health-care services as noted by their standard deviations (1.27, 1.3, and 1.32, respectively).

The other assessment question is: How important are these health-care services to residents of the community? To answer this, we must examine the perceived importance means of these health-care services, as shown in Table 2. The majority of the residents report that these three types of health-care services are “very important” (means of perceived importance =
0.97, 0.90, and 0.87, respectively). This should lead health-care providers and public policy officials to realize that these three types of health-care services are lacking and are important to the community citizens.

Two follow-up questions must be asked. The first of these is: Could the reported dissatisfaction be because of lack of knowledge of the availability or quality level of these services? If so, then the appropriate action may be to increase the promotional efforts concerning these services, not to readjust the service component itself; the latter choice being potentially more costly and disruptive. Table 2 shows most community residents have “some” knowledge of these health-care services (means of knowledge = 0.57, 0.58, and 0.54, respectively). Perhaps the action necessary here is to center efforts on the promotional side to educate the public about the availability or quality of these services in the community.

The second question is: Are the health-care services identified to be lacking in quality heavily used by the community residents? If so, then action should be taken to develop these services further. Table 2 shows that most community residents know of friends and acquaintances who have used the aforementioned services (means of use = 0.52, 0.40, and 0.42, respectively). Based upon these results, action would be taken to develop further (or at least maintain) health-care programs and services in the provider’s system portfolio that are related to elderly health, alcohol and drug abuse, and home health.

Conclusions

As noted at the beginning of this paper, the potential for significant change in the health-care industry is quite high. As the change to managed competition moves forward, health-care organizations will be asked (by public policy officials) to demonstrate the actual contribution of their health-care programs and services to the community. A model that has an ability to link specific health-care programs and services to QOL of individuals in the community provides health-care organizations with a valuable tool because of its ability to demonstrate such a contribution.

The proposed model and the QOL philosophy are consistent with the stakeholder model that has been advocated by many interested in business ethics (Evan and Freeman, 1988). The stakeholder model maintains that any business has multiple constituencies to which is responsible. Not only does it need to be responsible to its stockholders, it must also be responsible to its employees, suppliers, consumers, government, community, environment, etc. Implicit in the QOL approach is the notion of multiple constituencies. The firm is responsible for meeting the “healthful” demands of the consumer and, at the same time, contributing to the betterment of the community and other publics that make up its operating environment.

The QOL approach posits that the marketer’s primary mission is to focus on specific segments of the society and attempt to develop products, services, and/or programs that not only satisfy the consumers within that segment, but enhance a certain dimension of their well-being. The firm should, thus, focus on establishing long-term relationships with the variety of segments within the community it serves. Specifically, the firms should do so with the intention of maximizing the firm’s positive impact on the lives of those consumers. Health-care organizations, by their very nature and purpose, seem to be the embodiment of the perfect type of firm to become leaders to a move to a QOL perspective in strategic planning. The use of the proposed model and method can aid in such a move by providing decision makers with a measurement tool that can be used to assess the effectiveness of their programs/services to the community they serve.

References


Sirgy, M. J., Mentzer, T., Rahtz, D. R., and Meadow, H. L.: Satisfaction


