M. JOSEPH SIRGY*, DON R. RAHTZ, MURIS CICIC and
ROBERT UNDERWOOD

A METHOD FOR ASSESSING RESIDENTS' SATISFACTION WITH COMMUNITY-BASED SERVICES: A QUALITY-OF-LIFE PERSPECTIVE

(Accepted 11 November, 1998)

ABSTRACT. A method for assessing residents' satisfaction with community-based services is developed and tested using four samples. The method is based on the theoretical notion that consumer satisfaction with individual government services (e.g., police, fire/rescue, and library), business services (e.g., banking/savings, insurance, and department stores), and nonprofit services (e.g., alcohol/drug abuse services, crisis intervention, and religious services) affect satisfaction with the community at large (global community satisfaction). Ultimately, this global community satisfaction, together with satisfaction with other relevant life domains (work, family, leisure, etc.), affect global life satisfaction. The theoretical notions are explained using bottom-up spillover theory – a theory highly established in quality-of-life research. This theory applied to the proposed method explains that residents' overall satisfaction with a community can be decomposed into a variety of sub-domains, each of which contributes to their overall feelings about the community. Survey data from four different communities were collected to test the validity of the method. The results provided support to the model and the assessment method and measures used. From a managerial perspective, we showed how the model and the assessment method can be used by community leaders to tap citizens' perception of community quality-of-life and its determinants, identify strategic gaps or problem areas, and take corrective action.

INTRODUCTION

Today's global marketplace is one characterized by capital and technology flowing freely across state and national boundaries. In such a fluid, global environment, communities vie for industrial facilities, government contracts, high-profile events and sport teams to secure their economic future and shape the community's self and public image. The marketing of communities has thus become a multi-billion dollar scramble that is critical to a community's

Social Indicators Research **49:** 279–316, 2000.

economic survival and well being (Kotler et al., 1994). Popular publications such as *Places Rated Almanac, Fortune's Best Cities for Business*, and *Inc.'s Best Place in America to Own a Business* feed this competition for economic development and contribute to a desire for self-worth among communities. In order for communities to be successful in this competition for development, they must perform an accurate internal assessment of their resources, and translate these resource qualities into values for the external marketplace (Kotler et al., 1994).[1] One resource measure that has rapidly become a focal point of competition among vying communities is an overall evaluation of a community's "quality of life (QOL)." An extensive array of research has examined the issue of quality of community life, providing conceptual, methodological, and substantive advances in the area, within and across the disciplines of anthropology, economics, marketing, psychology, sociology, and urban planning. This research has established community QOL as one factor that contributes to a community's attractiveness as a site for industrial development, tourism, event site location, etc. (Barlyn, 1995; Precourt and Faircloth, 1996).

The research to date, however, has been relatively limited with regard to community residents' satisfaction with *specific* services in their area. The purpose of this article is to introduce an assessment method designed to measure satisfaction with *specific* government, business, and nonprofit services in a way believed to influence the overall QOL of community citizenry. The proposed QOL instrument, thus, is a tool for *internal marketing* assessment and corrective action. It is designed to provide community leaders with a more refined tool to tap the specific perceptions of community QOL by the citizenry, as well as the specific determinants of the QOL.

The following illustration should provide insight into the applicability of this research. A QOL assessment reveals that the school system is perceived by community residents to be of low quality and faltering. This dissatisfaction is then identified as a major cause in dissatisfaction with their community in general. Ultimately, the residents' feelings of dissatisfaction with their community not only detracts from the community's overall QOL, but may also translate into a competitive disadvantage for industrial recruitment, high-profile events, etc. Armed with this QOL strategic infor-

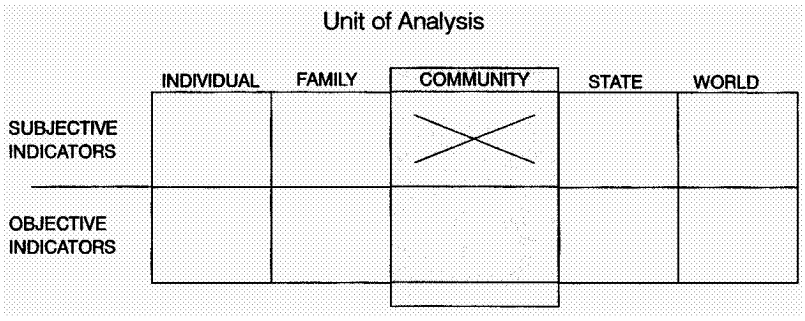

Figure 1. A classification of quality-of-life (QOL) concepts and measures.

mation, however, community leaders develop strategies to address the problems of the school system. In this context, the community QOL assessment can allow community leaders to identify areas of community strengths and weaknesses or *strategic gaps* for possible action. Identifying and addressing these strategic gaps should enhance the QOL for community citizens and also should place the community in a more strategically advantageous position in the external marketplace.

The organization of the paper is as follows: a review of the relevant QOL literature is presented, followed by the introduction of the conceptual model and resulting hypotheses. A LISREL analysis, incorporating survey data from four sample communities, tests the validity of the assessment tool and is presented along with pertinent managerial implications.

BACKGROUND

The literature addressing QOL makes two implicit distinctions: (1) QOL measured through different units (or levels) of analysis, and (2) QOL measured through subjective versus objective indicators. Figure 1 shows various conceptions and measures of QOL based on the subjective/objective and unit-of-analysis distinctions. In terms of units (or levels) of analysis, the figure illustrates that the past research has addressed QOL from an individual, family, community, state, and global perspective (Sirgy et al., 1995). In our development of a policy-based community QOL measure, the focus here is the area dealing with both community QOL and subjective QOL.

Community QOL

The term community QOL is intrinsically multidimensional. A definition of the concept is thus contingent on the social science field of interest and the specific focus of research. Proshansky and Fabian (1986) have suggested that a better understanding of community QOL will be garnered from research questions that are more specific in their focus. For example, in their efforts to come up with a definitive judgment of the psychological aspects of the quality of urban life, they maintained that one must ask the question, "What kinds of quality, for what kinds of people, in what kinds of places?"

The focus of community QOL research to date has dealt mainly with aiding the development of urban policy and directing resources to urban needs. This focus is conceptually distinct from individual QOL research that has examined variables impacting the physical and psychological well-being of the individual. Supporting this distinction, Shin (1980) proposed that community QOL be considered as a factor that impacts an individual's overall QOL.

The term community is itself multilevel, having been represented in the literature in the context of neighborhood, region, city, country, etc. Research has examined and illustrated numerous resources within these communities that serve to impact the welfare of the individual (Shin, 1980). These resources can generally be grouped under categories such as economic, social, political, health and education, and environmental conditions (Lieske, 1990). Adhering to the policy-based nature of community QOL research, we believe that only those resources subject to reasoned policy choice qualify as proper components of community QOL measure. In other words, many resources affecting QOL (climatic conditions, geography, etc.) are not subject to modification by government, business, and community change agents, therefore, they should not be included as part of the conceptualization and measurement of community QOL (Shin, 1980).

Subjective versus Objective Indicators of Community QOL

A second distinction noted by Jeffres and Dobos (1992) involves the fact that community QOL is measured through both objective and subjective indicators. The distinction between subjective and objective indicators of community QOL has fueled controversy

and spurred much research (e.g., Proshansky and Fabian, 1992). Research focusing on community QOL using objective indicators has employed measures such as community educational assets, health and recreation facilities, economic and demographic indices, etc. (e.g., Berger et al., 1987; Flax, 1976; Liu, 1976; Lieske, 1990). Popular publications such as *Place Rates Almanac* and *Fortune's Best Cities for Business* epitomize the use of objective indicators of community QOL. Subjective indicators of community QOL include measures indicating individuals' attitudes and feelings, levels of satisfaction, commitment, motivation, etc., in relation to their communities (e.g., Bardo, 1984; Fernandez and Kulik, 1981; Jeffres and Dobos, 1992; Shin, 1980; Widgery, 1982, 1992).

Critics of objective indicators argue that differences exist among individuals in their perceptions of the same communities, resulting in problems with reconcilement and interpretation. Shin (1980) has suggested that resources alone cannot constitute community QOL; subjective experiences of community life are needed to effectively measure this construct. Critics of subjective indicators have viewed them as "soft"; an expression of feelings regarding an object or condition, not the condition itself (Widgery, 1992). However, the view emerging is that community QOL is a function of the actual conditions in the environment as well as a function of how these conditions are perceived and experienced by the individual residing within the community (Proshansky and Fabian, 1986).

An interesting empirical question central to this issue is the level of correlation between the objective characteristics and subjective judgments. Several early studies (Schuman and Gruenberg, 1974; Campbell et al., 1976; Marans et al., 1976; Stipak, 1977) found this relationship to vary greatly. Examining this relationship within the context of neighborhood quality of life, Widgery (1992) found a significant relationship between objective and subjective indicators. Even though the objective indicators were significant, the study provided evidence that objective indicators are less strongly correlated with overall neighborhood quality than are the subjective variables. In that study, the objective indicators accounted for a significantly smaller variance in satisfaction than the subjective indicators. Although the use of objective indicators has been prevalent in community QOL studies, Widgery's study suggests that

measures of satisfaction with community life may be superior to simple indicators of material circumstances.

Subjective Indicators of Community QOL

Several studies have addressed community QOL issues utilizing individual measures of satisfaction (e.g., Bardo, 1984; Goitein and Forsythe, 1995; Shin, 1980; Wagner, 1995; Widgery, 1982, 1992). Shin (1980) concluded that community QOL has two conceptually distinct and equally important dimensions: (1) the level of citizen satisfaction related with various community resources, and (2) the distribution of this satisfaction across the citizenry. The resources measured in the Shin study included public schools, medical care, housing, government services, and neighborhood safety.

Widgery (1982) developed a predictive model of community QOL, looking both at community (Flint, Michigan) and neighborhood. Significant predictors of community-wide satisfaction were: trust in government and the political system, satisfaction with family and friends in the community, aesthetic quality of the community, age and years in the community, and optimism about the community.

Goitein and Forsythe (1995) measured the QOL dimensions of the city of Peoria, Illinois and surrounding central Illinois counties. Respondents with a positive perception of their area's safety, of its air quality, of its adequacy for retirement, and its sports and recreational opportunities for area children, were found to have a significantly more overall positive image of the community than respondents who reported a more negative assessment of these four QOL dimensions.

Wagner (1995) conducted a recent study by the Regional Plan Association and Quinnipiac College Polling Institute of Hamden, Connecticut. This study surveyed five metropolitan areas (New York–New Jersey–Connecticut; Los Angeles–Riverside–Orange County; Dallas–Fort Worth; Atlanta; and Seattle–Tacoma–Bremerton) in an attempt to pin down how community residents define quality of life. Low crime and safe streets topped the list, while additional important issues included high-quality public schools, a good personal financial situation, strong family and good health.

Although these studies certainly address factors pertinent to community QOL, they lack a specificity of focus regarding

community-related programs and services. Questions measuring *satisfaction with services* have been relatively broad, referring to domains such as satisfaction with government or community services in general. This research seeks to develop a comprehensive community-based QOL measure that addresses degrees of personal importance and satisfaction residents place on *specific* government, business, and nonprofit services. Examples of services incorporation under each of the three domains include public education, fire, rescue, library, police, and sanitation services (government); banking/savings, insurance, restaurants/night clubs, and daycare services (business); and alcohol/drug, crisis intervention, adoption/foster care, and family planning services (nonprofit). These service categories represent *community-related* life subdomains assumed to play a significant role in influencing overall life satisfaction. This focus on specific services will better enable community leaders to address the specific issues impacting citizen satisfaction and/or dissatisfaction across all segments of a community.

CONCEPTUAL DEVELOPMENT

The theoretical model guiding the development of the community-based QOL measure is shown in Figure 2. The model makes the distinction between "community" and "other" life domains, which contribute to perceived QOL. The community life domain pertains to one's perception of one's overall community. In contrast, "other" life domains are those that pertain to non-community domains, such as health, work, marriage and family, physical fitness, income, standard of living, among others(e.g., Andrews and Withey, 1976; Campbell et al., 1976) (see Figure 2). It should be noted that community and neighborhood are two distinct phenomena. The conceptual distinction between community and neighborhood is based on research that has shown satisfaction with neighborhood to be a significant factor in one's satisfaction with life at large. Neighborhood is conceptualized here as that geography considered by most individuals as their nearest psychic space beyond the home (Widgery, 1992). Fernandez and Kulik (1981) have noted that neighborhoods are social contexts within which individuals draw satisfaction and "live." They showed that various characteristics of

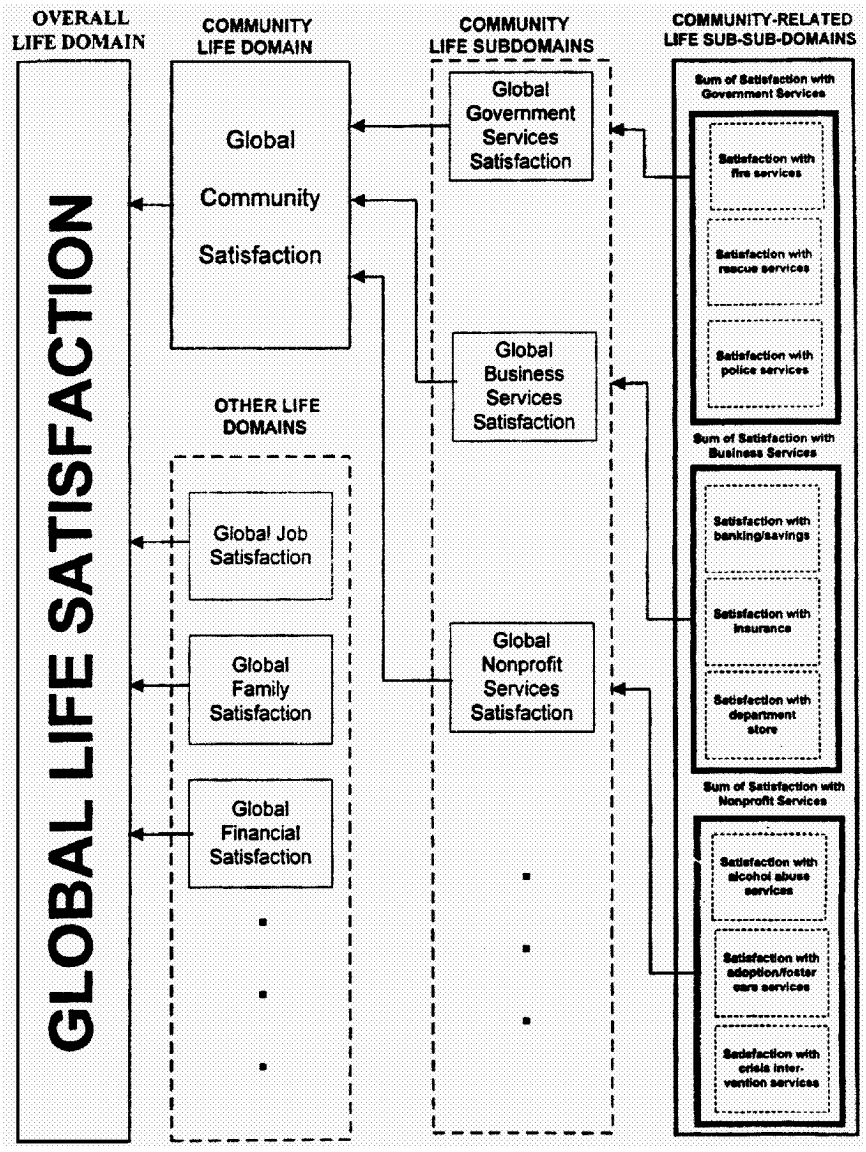

Figure 2. A community QOL model.

neighborhoods and individual social comparisons to neighborhoods affect residents' life satisfaction.

The model posits that one's global life satisfaction is affected by the global satisfaction with both community and other life domains (Andrews and Withey, 1976; Campbell et al., 1976; Diener, 1984). Satisfaction with community is likely to be determined by overall

satisfaction with government, business, and nonprofit services. In turn, satisfaction with government services is likely to be determined by satisfaction with specific government services perceived to be important. Similarly, business and nonprofit services are likely to be determined by satisfaction with specific services perceived to be important.

The relationship between satisfaction with government, business, and nonprofit services and life satisfaction can be explained using the *bottom-up spillover theory* established in quality-of-life research (Andrews and Withey, 1976; Campbell et al., 1976; Diener, 1984). The bottom-up theoretical conceptualization of the relationships in our model is also suggested by research in consumer satisfaction is functionally related to satisfaction with all of life's domains and subdomains. Life satisfaction is thought to be on top of an attitude (or satisfaction) hierarchy. Thus, life satisfaction is influenced by satisfaction with life domains (e.g., satisfaction with community, family, work, social lie, health, and so on). Satisfaction with a particular life domain (e.g., community satisfaction), in turn, is influenced by lower levels of life concerns within that domain (e.g., satisfaction with government, business, and nonprofit services). That is, life satisfaction is mostly determined by evaluations of individual life concerns. Thus, the greater the life satisfaction with such life domains as community, personal health, work, family, neighborhood, and leisure, the greater is the satisfaction with life in general. Specifically, the bottom-up theory of life satisfaction postulates that global life satisfaction is determined by global satisfaction with major life domains, such as community satisfaction, job satisfaction, family satisfaction, personal health satisfaction, neighborhood satisfaction, etc. The affect within a life domain spills over vertically to the most super-ordinate domain (life in general), thus determining life satisfaction. Similarly, this theory postulates that global satisfaction with a given life domain (community life) is determined by satisfaction with the life conditions/concerns (i.e., government, business, and nonprofit services) making up that domain.

It is argued here that the relationship between life satisfaction and satisfaction with specific government, business, and nonprofit services within a given community is a type of *bottom-up spillover* effect. For example, we hypothesize that there is an indirect relation-

ship between life satisfaction and satisfaction with a specific government service (e.g., police) mediated by global satisfaction with overall government services and overall community as shown in Figure 2.

Most multiattribute attitude models use the same logic in predicting and explaining attitude (e.g., Fishbein and Ajzen, 1975; Wilkie and Pessemier, 1973). That is, a consumer's attitude toward, say, government services in the community is a direct function of the sum (or average) of the consumer's evaluations of the various and specific government services, moderated by the perceived importance of each service. Satisfaction researchers have used the same logic to conceptualize the determinants of consumer satisfaction (e.g., Aiello et al., 1977). That is, evaluation of each government service provided in the community is viewed as satisfaction. Therefore, global satisfaction with government services is conceptualized to be determined by the sum (or average) of the satisfaction of each service weighted by the perceived importance of the service. The same logical formulation applies to the determinants of global satisfaction with business services and global satisfaction with nonprofit services too.

Global satisfaction with community is thus postulated to be determined by global satisfaction with government services, business services, and nonprofit services. Global satisfaction with government services is determined by the sum (or average) of satisfaction with individual government services (e.g., police, fire protection, transportation, utilities, recreation facilities, schools, among others), weighted by the perceived importance of each. Similarly, global satisfaction with nonprofit services is adoption/foster care services, counseling/support services, cultural/recreation services, educational services, legal services, senior citizen services, among others), weighted by the perceived importance of each. Furthermore, global satisfaction with business services is determined by the sum (or average) of satisfaction with individual business services (e.g., retailers, restaurants, hotels/motels, hospitals and medical care centers, automobile dealerships and repair services, media services, among others), weighted by the perceived importance of each.

Given these posited theoretical relationships, the following hypotheses are put forth:

> *Hypothesis 1*: Global life satisfaction is a direct function of global community satisfaction, in addition to global satisfaction with other life domains.
>
> *Hypothesis 2*: Global community satisfaction is a direct function of global satisfaction with government, business, and nonprofit services.
>
> *Hypothesis 3*: Global satisfaction with government services is a direct function of the sum (or average) of satisfaction with individual government services (e.g., fire, rescue, library, etc.), weighted by the perceived importance of each service.
>
> *Hypothesis 4*: Global satisfaction with business services is a direct function of the sum (or average) of satisfaction with individual business services (e.g., banking/savings, insurance, restaurants, etc.), weighted by the perceived importance of each service.
>
> *Hypothesis 5*: Global satisfaction with nonprofit services is a direct function of the sum (or average) of satisfaction with individual nonprofit services (e.g., alcohol/drug abuse, crisis intervention, adoption/foster care, etc.), weighted by the perceived importance of each service.

We put forth the aforementioned hypotheses because providing empirical support for them would provide nomological validation of our proposed method and measures of community QOL.

METHOD

Procedure to Identify Life Domains

In order to determine the life domains that are important in affecting an individual's overall life satisfaction, a pretest was conducted using a convenience sample of 39 faculty and staff. Most of the life domains were selected based on the existing literature (Andrew and Withey, 1976; Chamberlain, 1988; Diener, 1984). Thirty four domains were rated in importance using 5-point importance rating

scales (McNail et al., 1986). Based on this analysis, 20 domains were deemed sufficiently important and were used in the survey questionnaire to measure the satisfaction with (and importance of) life domains.

Sample-Specific Procedure to Identify Community Services

We collected data from four samples in the context of four different communities. Since specific government, nonprofit, and business services usually differ from one community to another, we conducted a pretest for each sample. Around 15 community residents (for each sample) listed all the government, nonprofit, and business services they considered are present and somewhat important in their communities to maintain a high level of quality of life in the community. The services identified by the sample-specific pretest subjects were used in creating the satisfaction and perceived importance measures related to government, nonprofit, and business services.

Sampling and Sample Characteristics

Four samples from different communities were used in this study. The goal is to gather data from different communities, not necessarily to generalize the findings about these communities, but instead to generate enough variability to allow us to test the hypothesized relationships. *This can be accomplished by pooling data from the different samples and testing the hypothesized relationships using the pooled data. It should be noted that our goal here is to test the nomological validity of the proposed community QOL measures through a series of studies that test the hypotheses developed from theory. Therefore, the focus of the current research is internal validity, not external. Hence, no attempt was made to establish the representativeness and generalizability of our samples.*

Two samples were drawn from two communities in the U.S.A., and two other samples were drawn from two communities in Australia. The first sample was based on a small town in the U.S.A., the residents of Floyd, Virginia. The sampling frame consisted of a list of the entire population of town residents. The list was obtained from the town business office extracted from the taxation records. There were 203 local residents. A mail survey was conducted. All

local residents were sent a survey questionnaire. Fifty-seven of the town residents completed and returned the questionnaire (a response rate of 28 percent).

The second sample was drawn from the Hampton Roads region of Virginia. Three thousand questionnaires were mailed out to a random sample of community residents. Six-hundred and twenty four completed the questionnaire. About 100 questionnaires were returned because of change of address, generating a total response rate of 22 percent.

The third sample was taken from Australia. The Australian sampling frame consisted of a telephone directory listing of a selected residential suburb (Fairy Meadow) of the City of Wollongong. A list of 210 residents in the sample was selected via a systematic random sampling technique. A mail survey was conducted using an instrument identical to the U.S. instrument, aside from a small number of language adjustments (e.g., "pharmacy" was changed "chemist"; "water supply" was changed to "water board," etc.). Fifty-one completed questionnaires were returned. Sixteen additional surveys were returned following a telephone follow-up call. The number of questionnaires returned totaled 67, indicating a response rate of 32 percent.

The fourth sample also was drawn from another residential suburb of the City of Wollongong. One thousand questionnaires were mailed out to a random selection of residents. Two-hundred and forty three questionnaires were completed and returned with 44 questionnaires returned because of "address unknown." Thus, the response rate was 25.4 percent.

The demographics of the resident respondents from the four sample are shown in Table I. The results indicate that resident respondents can be characterized as varied in age, more males, mostly live in households of one or two people, mostly own their place of residence, mostly married, and mostly in managerial/professional, technical/sales/administrative, and services occupations (see Appendix 1).

Survey Measures

The conceptual model (as shown in Figure 2 and articulated through hypotheses 1 through 5) contains the following satisfaction

constructs: satisfaction with individual government services such as fire, rescue, library, police, and sanitation services; satisfaction with individual business services such as, banking/savings, insurance, restaurants/night clubs, and daycare services; satisfaction with individual nonprofit services such as alcohol/drug, crisis intervention, adoption/foster care, and family planning services; global satisfaction with government services; global satisfaction with business services; global satisfaction with nonprofit services; global satisfaction with community; global satisfaction with other life domains such as job, family, financial, health, education, friends/associates, leisure, neighborhood, and spiritual; and global satisfaction with life in general. The model also contains the following perceived importance of individual business services; and perceived importance of individual nonprofit services. These constructs and their measures will be described in some detail below. *It should be noted that all the measures of the model constructs are single-indicator measures. Because of the multiplicity of the constructs in the model, multiple indicators of the constructs would have made the survey questionnaire extremely lengthy, causing a high level of subject attrition and response bias due to fatigue.*

Global life satisfaction. Respondents were asked "How do you feel about your life as a whole?" Responses were tapped using the Delighted-Terrible Scale: +3 (delighted), +2 (pleased), +1 (mostly satisfied), 0 (mixed feelings), −1 (mostly dissatisfied), −2 (unhappy), and −3 (terrible). Also, respondents were instructed to "circle 'X' if 'you never thought about it,' or 'you don't have an opinion'." Descriptive statistics are shown in Appendix 2.

This measure of life satisfaction has established reliability and validity in the QOL literature. This measure had temporal reliability of 0.66 for a 15-minute period and 0.40 for a six-month period (Stock et al., 1982). Andrews and Withey (1976) reported high convergent validity with other self-report measures of related constructs. They also demonstrated nomological validity by providing empirical support for relationships between life satisfaction and variables such as self-efficacy, marriage, and standard of living. Other positive and strong evidence of the reliability and validity of this measure was reported by Larsen et al. (1983).

Global satisfaction with life domains. Global satisfaction with life domains was measured through the following question: "How do you feel about the areas of your life that are listed below? Indicate whether you feel good or bad about each area of your life" using the Delighted-Terrible Scale: +3 (delighted), +2 (pleased), +1 (mostly satisfied), 0 (mixed feelings), −1 (mostly dissatisfied), −2 (unhappy), and −3 (terrible). Also, respondents were instructed to "circle 'X' if 'you never thought about it.' 'you don't have an opinion', or 'it doesn't apply to you'." Descriptive statistics are shown in Appendix 2. This measure of global satisfaction with various life domains has established validity in QOL research (see Diener 1984 for a literature review).

Global satisfaction with the community life domain was measured through the following question: "How do you feel about your community?" Responses were tapped suing the Delighted-Terrible scale. Global satisfaction with other life domains was measured through satisfaction related to the following domains: job, family, financial, health, education, friendship, leisure, neighborhood, spiritual, environment, housing, cultural life, and social status. A similar scale was used here too (cf. Diener, 1984).

Satisfaction with government, business, and nonprofit services. Satisfaction with government, business, and nonprofit services was measured through the following question: "How do you feel about ___ services provided for your community that are listed below?" In measuring satisfaction with government services, several services were listed (these differed slightly from one sample to another). These are shown in Appendix 3. Similarly, in measuring satisfaction with business and nonprofit services, several services were listed. These are shown in appendix 4 and 5.

Respondents were instructed to "indicate whether you feel good or bad about each ___ service" using the Delighted-Terrible Scale: +3 (delighted), +2 (pleased), +1 (mostly satisfied), 0 (mixed feelings), −1 (mostly dissatisfied), −2 (unhappy), and −3 (terrible). Also, respondents were instructed to "circle 'X' if 'you don't have an opinion' or 'it doesn't apply to you'." Descriptive statistics are shown in appendices 3, 4, and 5.

Importance of government, business, and nonprofit services. This construct was measured through the following question: "How important or unimportant are the same ___ services?" This question followed the measure of satisfaction with government, business, and nonprofit services. Each of the respective services was listed. Respondents were instructed to "indicate the level of importance (to you and your family) you may feel about each ___ service using the following scale: +3 (of utmost importance), +2 (very important), +1 (somewhat important), 0 (so/so), −1 (somewhat unimportant), −2 (very unimportant), and −3 (of no importance whatsoever)". Descriptive statistics are shown in appendices 6, 7, and 8.

RESULTS

Table I shows the correlation matrix with means and standard deviations. An initial attempt was made to test the entire model through LISREL because of this method's ability to test mediating effects, not because of its ability to incorporate measurement reliability in estimating path coefficients. However, this attempt was not successful due to the fact that the model had too many variables. Therefore, an attempt was made to delete some of the global satisfaction variables dealing with individual life domains. This was done by regressing global life satisfaction against all the 14 global satisfaction variables dealing with individual life domains (community, job, family, financial, health, education, friendship, leisure, neighborhood, spiritual, environment, housing, culture, and social status). The results of this regression analysis are shown in Table II.

Based on these results, we decided to eliminate the following: global satisfaction with job, education, friendship, neighborhood, environment, housing, cultural life, and social status. Global satisfaction with family, financial, health, leisure, and spiritual were found to be strongly predictive of global life satisfaction. These were retained for further analysis through LISREL. The results of the LISREL analysis are shown in Table III.

Although the goodness-of-fit statistics did not look very good [X^2 (38 df) = 640 (p = 0.0); RMR = 0.48; Standardized RMR = 0.15; GFI = 0.85; Adjusted GFI = 0.65], the estimates, their t-value, and

R squares all looked positive and supportive of the hypotheses (H1 through H5). The LISREL output suggested that the goodness-of-fit indices can significantly be improved by adding the following links:

- Global satisfaction with community can be further predicted by global satisfaction with family, finances, health, leisure, government services, business services, and nonprofit services.
- Global satisfaction with community can be a significant predictor of global satisfaction with government and nonprofit services.
- Global satisfaction with government, business, and nonprofit services are reciprocally interrelated.

We re-ran the analysis with the addition of the new links as suggested by the modification indices and the goodness-of-fit statistics improved significantly [X^2 (25 df) = 116.81 (p = 0.0); RMR = 0.30; Standardized RMR = 0.06; GFI = 0.97; Adjusted GFI = 0.89]. Furthermore, the R^2 for global satisfaction with overall life increased from 0.43 to 0.48; R^2 for global satisfaction with community increased from 0.16 to 0.30; R^2 for global satisfaction with government services increased from 0.22 to 0.65; R^2 for global satisfaction with business services increased from 0.13 to 9.56; and R^2 for global satisfaction with nonprofit services increased from 0.17 to 0.41. The LISREL estimates, t-values, R^2, and goodness-of-fit statistics are all shown in Table III.

With respect to H1 (we hypothesized that global satisfaction with overall life is a direct function of global satisfaction with community in addition to global satisfaction in other life domains), the LISREL estimates of both the trimmed and modified models provide strong support for this hypothesis. Global satisfaction with community was found to be a strong predictor in the trimmed model (estimate = 0.19; t-value = 5.77, $p < 0.01$) and the modified model (estimate = 0.19; t-value = 5.34, $p < 0.01$). This finding suggest that indeed global satisfaction with community does play an important role in overall life satisfaction above and beyond satisfaction in other important life domains such as family, health, financial, leisure, and spiritual. Satisfaction with community in addition to these other life domains accounted for approximately half of the variation in overall life satisfaction.

TABLE I

Correlation matrix and standard deviations

	lif	com	job	fam	fin	hea	edu	fri	lei	nei	spi	env	hou	cul	soc	gov	bus	non	cg	cb	cn
lif	1																				
com	0.465	1																			
job	0.388	0.312	1																		
fam	0.553	0.300	0.342	1																	
fin	0.470	0.305	0.503	0.396	1																
hea	0.483	0.363	0.334	0.346	0.439	1															
edu	0.362	0.343	0.316	0.298	0.372	0.445 1															
fri	0.493	0.415	0.273	0.442	0.287	0.408	0.409	1													
lei	0.536	0.370	0.354	0.447	0.382	0.382	0.318	0.570	1												
nei	0.339	0.641	0.222	0.252	0.233	0.239	0.247	0.345	0.245	1											
spi	0.450	0.324	0.223	0.328	0.247	0.349	0.300	0.371	0.368	0.208	1										
env	0.279	0.401	0.217	0.213	0.217	0.222	0.271	0.236	0.239	0.340	0.233	1									
hou	0.410	0.456	0.287	0.465	0.327	0.322	0.335	0.370	0.397	0.449	0.281	0.246	1								
cul	0.478	0.324	0.274	0.401	0.368	0.300	0.357	0.536	0.644	0.243	0361	0.248	0.329	1							
soc	0.487	0.419	0.308	0.402	0.431	0.389	0.431	0.545	0.539	0.295	0.370	0.261	0.418	0.643	1						
gov	0.248	0.367	0.218	0.236	0.239	0.191	0.199	0.255	0.309	0.273	0.223	0.346	0.248	0.326	0.358	1					
bus	0.291	0.447	0.253	0.189	0.229	0.164	0.176	0.220	0.283	0.406	0.147	0.320	0.276	0.253	0.278	0.523	1				
non	0.293	0.390	0.205	0.216	0.231	0.224	0.239	0.251	0.300	0.347	0.245	0.300	0.187	0.312	0.304	0.637	0.587	1			
cg	0.222	0.392	0.274	0.261	0.218	0.225	0.223	0.241	0.246	0.292	0.242	0.323	0.223	0.261	0.252	0.473	0.407	0.474	1		

TABLE I

Continued

	lif	com	job	fam	fin	hea	edu	fri	lei	nei	spi	env	hou	cul	soc	gov	bus	non	cg	cb	cn
cb	0.202	0.304	0.199	0.233	0.177	0.217	0.178	0.266	0.301	0.196	0.212	0.220	0.228	0.258	0.243	0.353	0.358	0.428	0.664	1	
cn	0.173	0.300	0.164	0.228	0.115	0.133	0.202	0.228	0.258	0.160	0.299	0.213	0.198	0.266	0.260	0.413	0.296	0.415	0.549	0.478	1
SD Means:	5.75	5.30	5.09	5.86	4.73	5.51	5.46	5.73	5.36	5.29	5.39	4.84	5.61	5.21	5.32	4.48	4.87	4.72	27.72	27.04	26.35

Note:

lif = global satisfaction with life
com = global satisfaction with community
job = global satisfaction with job
fam = global satisfaction with family life
fin = global satisfaction with finances
hea = global satisfaction with personal health
edu = global satisfaction with education
fri = global satisfaction with friendships
lei = global satisfaction with leisure life
nei = global satisfaction with neighborhood
spi = global satisfaction with spiritual life
env = global satisfaction with the environment
hou = global satisfaction with housing
cul = global satisfaction with cultural life
soc = global satisfaction with social status
gov = global satisfaction with government services in the community
bus = global satisfaction with business services in the community
non = global satisfaction with nonprofit services in the community
cg = global satisfaction with government services in the community
cb = global satisfaction with business services in the community
cn = global satisfaction with nonprofit services in the community

TABLE II

Regressing global life satisfaction against global satisfaction dealing with individual life domains (pooled data)

	Beta Weight	Part Correlations	t-value	Sig.
com	0.140	0.093	3.515	0.000
job	0.036	0.029	1.111	0.267
fam	0.247	0.200	7.559	0.000
fin	0.117	0.090	3.415	0.001
hea	0.130	0.105	3.967	0.000
edu	−0.012	−0.010	−0.376	0.707
fri	0.053	0.038	1.427	0.154
lei	0.141	0.094	3.533	0.000
nei	0.000	0.000	0.007	0.994
spi	0.142	0.122	4.608	0.000
env	−0.004	−0.004	−0.132	0.895
hou	−0.001	−0.001	−0.038	0.970
cul	0.058	0.038	1.440	0.150
soc	0.057	0.038	1.440	0.150

Note: R = 0.750; R^2 = 0.562; R^2 = 0.553; $F_{df=16,626}$ = 57.279 (p = 0.000)

Note:

com = global satisfaction with community
job = global satisfaction with job
fam = global satisfaction with family life
fin = global satisfaction with finances
hea = global satisfaction with personal health
edu = global satisfaction with education
fri = global satisfaction with friendships
lei = global satisfaction with leisure life
nei = global satisfaction with neighborhood
spi = global satisfaction with spiritual life
env = global satisfaction with the environment
hou = global satisfaction with housing
cul = global satisfaction with cultural life
soc = global satisfaction with social status

With respect to H2 (we hypothesized that global satisfaction with community is a direct function of global satisfaction with government, business, and nonprofit services), the results of the trimmed model provided support for the hypothesis. However the modified model provided support for only the effect of business services (estimate = 0.23, t-value = 2.55, $p < 0.05$), not government or nonprofit services. The estimates pertaining to global satisfaction with government and nonprofit services were nonsignificant (estimates = 0.04 and 0.06, t-values = −0.68 and 0.79, both have $p > 0.10$). The modified model also showed that global satisfaction with community was influenced by global satisfaction with family, health, leisure, and spiritual (see Table III). We believe that the results of the modified model are not surprising because one can argue that satisfaction with important life domains such as family, health, leisure, and spiritual is likely to spill over in the community life domain and thus influence global community satisfaction. That is not to say that global community satisfaction is not influenced by satisfaction with government and non-profit services. The influence is there as evidenced in the trimmed model, but that influence decreases significantly in the presence of satisfaction with important life domains such as family, health, leisure, and spiritual. Therefore, we conclude that the data provides some support for H2.

With respect to H3 (we hypothesized that global satisfaction with government services is a direct function of the sum or average of satisfaction with individual government services, weighted by perceived importance of each service), the LISREL estimates of both the trimmed and modified models provided support for this hypothesis. The composite variable of satisfaction with government services (cg) was found to be a significant satisfaction predictor of global satisfaction with government services in the trimmed model (estimate = 0.10; t-value = 12.52, $p < 0.01$) and the modified model (estimate = 0.14; t-value = 5.13, $p < 0.01$). The composite variable in the trimmed model accounted for 0.22 of the variance in the global satisfaction variable. In contrast, 0.65 of the variance was accounted for in the modified model in which the composite variable and reciprocal paths with neighboring constructs (from com to gov, from bus to gov, and from non to gov) were included. The R^2 was significantly increased (from 0.22 to 0.65) by adding these

TABLE III

Testing the Trimmed and Modified Versions of the Hypothesized Model

	Trimmed Model			Modified Model		
	Estimate	t-value	R^2	Estimate	t-value	R^2
Com → lif	0.19	5.77***		0.19	5.34***	
Fam → lif	0.02	0.67		0.02	0.67	
Fin → lif	0.24	5.21***		0.14	5.20***	
Hea → lif	0.15	4.44***		0.15	4.36***	
Lei → lif	0.21	6.83***		0.21	6.77***	
Spi → lif	0.15	5.34***		0.15	5.30***	
			0.43			0.48
gov → com	0.10	3.24***		−0.04	−0.68	
bus → com	0.28	8.05***		0.23	35**	
non → com	0.12	3.51***		0.06	0.79	
fam → com				0.08	2.08*	
fin → com				0.04	1.40	
hea → com				0.16	4.22***	
lei → com				0.11	3.03**	
spi → com				0.09	30**	
			0.16			0.30
cg → gov	0.10	132***		0.14	5.13***	
com → gov				0.24	1.85*	
bus → gov				−0.91	−3.18***	
non → gov				0.15	0.83	
			0.22			0.65
cb → bus	0.07	8.94***		0.16	1.66*	
gov → bus				3.03	1.60*	
non → bus				−3.78	−1.29	
			0.13			9.56
cn → non	0.06	10.64***		0.04	3.40***	
com → non				0.08	0.57	
gov → non				−0.55	−1.62*	
bus → non				1.25	3.91***	
			0.17			0.41

TABLE III

Continued

	Trimmed Model			Modified Model		
	Estimate	t-value	R^2	Estimate	t-value	R^2
	X^2 (df = 38) = 640 (p = 0.0)			X^2 (df = 25) = 116.81 (p = 0.0)		
	RMR = 0.48			RMR = 0.30		
	Standardized RMR = 0.15			Standardized RMR = 0.06		
	GFI = 0.85			GFI = 0.97		
	Adjusted GFI = 0.65			Adjusted GFI = 0.89		

Note: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
Pooled data: N = 553 (listwise deletion)

com = global satisfaction with community
fam = global satisfaction with family life
hea = global satisfaction with personal health
fri = global satisfaction with friendships
nei = global satisfaction with neighborhood
env = global satisfaction with the environment
cul = global satisfaction with cultural life
job = global satisfaction with job
fin = global satisfaction with finances
edu = global satisfaction with education
lei = global satisfaction with leisure life
spi = global satisfaction with spiritual life
hou = global satisfaction with housing
soc = global satisfaction with social status

reciprocal links, especially the path from global satisfaction with community to global satisfaction with government services. We therefore conclude that the data were mostly supportive of H3.

With respect to H4 (we hypothesized that global satisfaction with business services is a direct function of the sum or average of satisfaction with individual business services, weighted by perceived importance of each service), the LISREL estimates of both the trimmed and modified models provide support for this hypothesis. The composite variable of satisfaction with business services (cb) was found to be a significant predictor of global satisfaction with business services in the trimmed model (estimate = 0.07; t-value = 8.94, $p < 0.01$) and the modified model (estimate = 0.16; t-value = 1.66, $p < 0.10$). The composite variable in the trimmed model accounted for 0.13 of the variance in the global satisfaction variable. We therefore conclude that the data were mostly supportive of H4.

With respect to H5 (we hypothesized that global satisfaction with nonprofit services is a direct function of the sum of average of satis-

faction with individual nonprofit services, weighted by perceived importance of each services), the LISREL estimates of both the trimmed and modified models provided support for this hypothesis. The composite variable of nonprofit services (cn) was found to be a significant predictor of global satisfaction with nonprofit services in the trimmed model (estimate = 0.06; t-value = 10.64, $p < 0.01$) and the modified model (estimate = 0.04; t-value = 3.40, $p < 0.01$). The composite variable in the trimmed model accounted for 0.17 of the variance in the global satisfaction variable. The R^2 was significantly increased (from 0.17 to 0.41) by adding paths from global satisfaction with community, government, and business services. We conclude that this pattern of data provide support for H5.

MANAGERIAL IMPLICATIONS: APPLYING THE METHOD

This study provides validational support to the community QOL assessment method described in this paper. The *composite* indices of government, business, and nonprofit services satisfaction were shown to be predictive of *global* measures of government, business, and nonprofit services satisfaction, respectively. The global satisfaction measures of government, business, and nonprofit services were shown to be predictive of global community satisfaction, which in turn was also shown to be predictive of global life satisfaction. Thus, the proposed community QOL assessment method can be considered a valid measurement tool – a tool that can be used by community leaders to assess community needs in a manner related to the overall life satisfaction of the community leaders to assess community needs in a manner related to the overall life satisfaction of the community citizenry. The real value in such a tool lies in its ability to be applied to strategic planning within the community.

The assessment tool developed here allows community leaders to gather information about community QOL. Based on the information gathered, specific policies can be designed to enhance the delivery of certain government, nonprofit, and/or business services. These services, in turn, should enhance the perceived QOL of the local residents of the community in question. More specifically, the assessment measures are designed to provide practical information regarding:

- Local residents' degree of satisfaction with government, nonprofit, and business services, in general. This can be measured over time to monitor community trends.
- Local residents' degree of satisfaction with (and degree of importance local residents place on) government, nonprofit, and business services, broken down by specific types of services. This information allows community leaders to identify community strengths and weaknesses.

Thus, community strengths, can be reinforced, whereas community weaknesses can be addressed by mobilizing to provide better services. A demonstration based on the results of one of the four samples, Hampton Roads in Virginia, may help the reader appreciate the practical utility of the community QOL assessment method. Let us start out by focusing on government services. The reader may refer back to Appendix 3. The data show that in the Hampton Roads community, most citizens report moderate dissatisfaction with town (3.79) and county (3.79) administration, economic development efforts (4.26) employment/job assistance (3.91), cost of utilities (3.55), public education (4.34), and real estate taxes (3.39). It is also necessary to find out how important these government services in the minds of the Hampton Roads citizens are. The data show (in Appendix 6) that town and county administration are considered to be very important (5.50), economic development is considered very important (5.67), employment/job assistance to be somewhat important (4.90), cost of utilities to be very important (5.96), public education to be very important (1.03), and real estate taxes to be very important too (5.55). We can rank these government services in terms of their importance as follows:

1st most important:	public education = (6.03)
2nd most important:	cost of utilities = (5.96)
3rd most important:	economic development = (5.67)
4th most important:	real estate taxes = (5.55)
5th most important:	employment/job assistance = (4.90)

Hampton Roads community leaders, thus, can place more effort, and resources, toward programs designed to enhance satisfaction (and decrease dissatisfaction) with public education, cost of util-

ities, economic development, real estate taxes, and employment/job assistance. Efforts and resources can be prioritized as a direct function of the perceived importance of these government services. That is, public education should be considered as a top priority item, followed by cost of utilities, economic development, real estate taxes, and employment/job assistance, in that order.

With respect to business services, the data show that most citizens in the Hampton Roads area report dissatisfaction with day care services (4.52), spectator sports (4.13), local newspapers (4.52), and automobile care services (4.63) [see Appendix 4]. The data also show that day care services are considered to be "somewhat unimportant" (3.19). However, we should note the standard deviation is larger (2.23), which means that the perceived importance of day care services vary significantly among the Hampton Roads citizens (see Appendix 7). The perceived importance of spectator sports is "so/so" (4.34) with a standard deviation of 1.70, reflecting a diversity of views on this service. With respect to the local newspapers, most citizens view this business service as between "somewhat important" (5.46). And finally, automobile care services are regarded as "very important" by most of the Hampton Roads citizens (5.65).

We can rank these business services in terms of their importance as follows:

1st most important – automobile care services	(5.65)
2nd most important – local newspaper	(5.46)
3rd most important – spectator sports	(4.34)
4th most important – day care services	(3.19)

Therefore, Hampton Roads community leaders should place more effort and resources toward business that can enhance citizen satisfaction with automobile care services, local newspapers, spectator sports, and day care services, in that order.

With respect to nonprofit services, the data indicate that most citizens in the Hampton Roads area report "mixed feelings" about adoption/foster care services (4.25) and family planning services (4.27) [see Appendix 5]. However, as shown in Appendix 8 they also report that these services are "so/so" in importance (4.05 and

4.05, respectively), with significant variation in their perception of importance (1.99 and 2.04 in standard deviation, respectively). Therefore, community leaders may focus their attention on these two services. However, they should recognize that enhancing satisfaction in relation to these services is not likely to make much difference in enhancing the QOL of the Hampton Roads citizens.

It should be noted that the examples we used here focus on consumer dissatisfaction to identify strategic gaps. In other words, the focus of the examples is on identifying community weaknesses. Community leaders can and should also focus on community strengths by examining satisfaction with specific community services. Thus, community services identified as generating a high degree of consumer satisfaction can be used to position the community effectively for marketing to external constituents (e.g., industrial recruitment for economic development).

For strategic planning purposes it is important that public policy officials are provided with not only a guiding philosophy and framework in which to make decisions, but also specific tools that will guide them in integrating, implementing, and monitoring their communities' programs and services. This is especially true in communities whose services portfolios contain a wide variety of services and a programs. Our method provides a specific framework in which community planners can examine, not only satisfaction and dissatisfaction with specific community services, but also the contribution of each service to the overall perception of community QOL.

NOTES

* M. Joseph Sirgy is a Professor of Marketing, Department of Marketing, Pamplin College of Business, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061-0236, USA; Don R. Rahtz is an Associate Professor of Marketing College of William and Mary, Williamsburg, VA 23187-8795, USA; Muris Cicic is an Associate Professor of Economics, Faculty of Economics, University of Sarajevo, Trg Oslobodjenja 1, Sarajevo, Bosnia-Herzegovina. Robert Underwood is an Assistant Professor of Marketing, Department of Marketing, Foster College of Business, Bradley University, Peoria, IL 61625. The authors acknowledge the assistance of Dennis Cole in data analysis involving a previous version of this paper.

[1] Within this context, one can refer to the evaluation of a community's capabilities and offerings as *internal marketing*. Analogous to a corporation's focus on the identification of factors impacting the satisfaction of its employees, marketing internally consists of evaluating and addressing the needs and wants of the internal constituents (i.e., the community's citizens). such internal efforts can encompass a broad range of endeavors, including efforts focusing on urban planning and development (Bressi, 1992; Duany and Plater-Zyberk, 1992; Gerloff, 1992; Lowe, 1992), total quality management programs (Smith, 1993), and advertising to community residents (Janofsky, 1994). The marketing of the community's assets to external constituents such as tourists, domestic and foreign firms looking to expand/invest, event organizers/site selectors, etc., can be considered *external marketing*. It must be recognized that these internal and external marketing programs, while directed at different groups, are strongly linked.

REFERENCES

Aiello, A. Jr., J. A. Czepiel and L. J. Rosenberg: 1977, 'Scaling the heights of consumer satisfaction: An evaluation of alternative measures', in R. Day (ed.), Consumer Satisfaction, Dissatisfaction, and Complaining Behavior (School of Business, Indiana University, Bloomington, IN), pp. 43–50.

Andrew, F. M. and S. B. Withey: 1976, Social Indicators of Well-Being: America's Perception of Life Quality (Plenum Press, New York).

Bardo, John, W.: 1984, 'Sociospatial predictors of community satisfaction', The Journal of Social Psychology 122, pp. 189–198.

Barlyn, Suzanne: 1995, 'It's San Francisco!', Fortune (Nov 13) 132(10), p. 84(7).

Bass, B. M. and R. Bass: 1976, 'Concern for the environment: Implications for industrial and organizational psychology', American Psychologist 31, pp. 158–166.

Berger, Mark, Glenn Blomquist and Werner Waldner: 1987, 'A revealed-preference ranking of quality of life for metropolitan areas', Social Science Quarterly 68, pp. 761–778.

Bressi, Todd W.: 1992, 'The neo-traditional revolution', Utne Reader (May/June), pp. 101–103.

Campbell, A., P. E. Converse and W. L. Rodgers: 1976, The Quality of American Life: Perspectives, Evaluations, and Satisfactions (Russel Sage Foundation, New York).

Chamberlain, Kerry: 1988, 'On the structure of subjective well-being', Social Indicators Research 20, pp. 581–604.

Diener (ed.): 1984, 'Subjective well-being', Psychological Bulletin 95(3), pp. 542–575.

Duany, Andres and Elizabeth Plater-Zyberk: 1992, 'The second coming of the small town', Utne Reader (May/June), pp. 97–100.

Fernandez, Roberto M. and Jane C. Kulik: 1981, 'A multilevel model of life satisfaction: Effects of individual characteristics and neighborhood composition', American Sociological Review (December) 46, pp. 840–850.
Fishbein, Martin and Icek Ajzen: 1975, Belief, Attitude, Intention, and Behavior (Addison-Wesley, Reading MA).
Flax, M. J.: 1976, A Study in Comparative Urban Indicators: Conditions in 10 Large Metropolitan Areas (The Urban Institute, Washington DC).
Gerloff, Robert: 1992, 'A rediscovering the village', Utne Reader (May/June), pp. 93–96.
Goitein, Bernard and Brian Forsythe: 1995, Positively Peoria: Final Report (Center for Business and Economic Research, Bradley University, Peoria, IL).
Huey, John: 1991, 'The best cities for business', Fortune (November), pp. 52–84.
Jeffres, Leo W. and Jean Dobos: 1992, 'Communication and public perceptions of the quality of life: Testing the model', in M. Joseph Sirgy, H. Lee Meadow, Don R. Rahtz and A. C. Samli (eds.), Developments in Quality-of-Life Studies in Marketing, Vol. IV (Academy of Marketing Science, Blacksburg, VA), pp. 43–49.
Janofsky, Michael: 1994, 'Selling a city to the people who live there: The Baltimore of tourists looks homeward and inward', The New York Times March 24.
Kotler, Philip, Donald Haider and Irving Rein: 1994, 'There's no place like our place!', Public Management (Feb, No. 2), p. 15(4).
Labich, Kenneth: 1993, 'The best cities for knowledge workers', Fortune (November), pp. 50–77.
Larsen, R. J., R. A. Emmons and Ed Diener: 1983, 'Validity and meaning of measures of subjective well-being', Paper presented at the Midwestern Psychological Association Convention (Chicago).
Liu, Ben: 1976, Quality of Life Indicators in U.S. Metropolitan Areas (Praeger, New York).
Lieske, Joel: 1990, 'The correlates of life quality in U.S. Metropolitan areas', The Journal of Federalism (Winter) 20, pp. 43–54.
Lowe, Marcia D.: 1992, 'How to make cities more humane', Utne Reader (May/June), pp. 104–106.
Marans, R. W., J. D. Wellman, S. J. Newman and J. Kruse: 1976, Waterfront Living: A Report on Permanent and Seasonal Residents in Northern Michigan (Institute for Social Research, The University of Michigan, Ann Arbor).
McNeil, Kevin J., M. J. Stones and Karen Albert: 1986, 'Subjective well-being in later life: Issues concerning measurement and prediction', Social Indicators Research 18, pp. 35–70.
Meadow, H. Lee: 1988, 'The satisfaction attitude hierarchy: Does marketing contribute?' in S. Shapiro et al. (eds.), Proceedings of the 19988 American Marketing Association Winter Educators Conference (American Marketing Association, Chicago, IL), pp. 482–483.
Precourt, Geoffrey and Anne Faircloth: 1996, 'Best cities: Where the living is easy', Fortune (Nov 11) 134(9), p. 126(13).

Proshansky, Harold M. and Abbe K. Fabian: 1986, 'Psychological aspects of the quality of urban life', in Dieter Frick (ed.), The Quality of Urban Life (Walter de Gruyter, New York), pp. 19–29.

Shin, Doh C.: 1980, 'Subjective indicators and the comparative evaluation of the quality of community life', American Journal of Community Psychology 8(5), pp. 523–535.

Schuman, H. and B. Gruenberg: 1972, 'Dissatisfaction with city services: Is race an important factor?', in H. Hahn (ed.), People and Politics in Urban Society (Sage Publications, Beverly Hills CA).

Sirgy, M. Joseph, H. Lee Meadow and A. C. Samli: 1995, 'Past, present and future: An overview of quality of life research in marketing', in M. Joseph Sirgy and A. C. Samli (eds.), New Dimensions in Marketing/Quality-of-Life Research (Quorum Books, Westport, CT), pp. 335–364.

Smith, Bob: 1993, 'A efforts improve quality of life in Virginia Beach', HR Focus (Feb) 70(2), p. 22(1).

Stipak, B: 1977, 'Attitudes and belief systems concerning urban services', The Public Opinion Quarterly 41, pp. 41–55.

Stock, W., M. Okun, S. Stock, M. Haring and R. A. Winter: 1982, 'Reporting reliability: A case study of life satisfaction research', Paper presented at the 90th Annual Convention of the American Psychological Association (Washington, DC).

Wagner, Stephen: 1995, 'Cities that satisfy', American Demographics 17(9), pp. 18–20.

Widgery, Robin N.: 1982, 'Satisfaction with the quality of urban life: A predictive model', American Journal of Community Psychology 10(1), pp. 37–48.

Widgery, Robin N.: 1992, 'Neighborhood quality of life: A subjective matter?', in M. Joseph Sirgy, H. Lee Meadow, Don R. Rahtz and A. C. Samli (eds.), Developments in Quality-of-Life Studies in Marketing, Vol. IV (Academy of Marketing Science, Blacksburg, VA), pp. 112–114.

Wilkie, William L. and Edgar A. Pessemier: 1973, 'Issues in marketing's use of multi-attribute attitude models', Journal of marketing research (November), pp. 428–441.

Virginia Polytechnic Institute & State University
Department of Marketing
Pamplin College of Business
Blacksburg VA 24061–0236
U.S.A.

Appendix 1

Demographic characteristics of samples

		U.S.A. (Hampton Rds) (N = 640)	U.S.A. (Floyd) (N = 57)	Australia (Woll. 1) (N = 67)	Australia (Woll. 2) (N = 240)
Age:	17–39	34.5%	21.4%	23.8%	33.5%
	40–57	39.4	26.6	28.6	33.4
	58–71	16.9	28.3	34.9	23.5
	72–93	9.2	19.7	12.7	9.6
Gender:	Male	65.0	57.1	67.2	57.5
	Female	35.0	42.9	32.8	42.5
# in household:	1	35.6	37.5	14.1	15.8
	2	43.2	44.6	35.9	31.7
	3	12.0	10.7	17.2	18.3
	4	6.2	7.1	17.2	19.2
	5 and above	3.0	–	15.7	15.1
Residence:	Rent	23.4	20.0	20.3	18.0
	Own	75.6	80.0	79.7	82.0
Marital status	Single	12.5	16.7	4.7	10.4
	Married	68.5	51.9	76.6	70.8
	Separated	3.0	1.9	1.6	2.5
	Widowed	5.6	22.2	10.9	10.4
	Divorced	10.5	7.4	6.3	5.8
Occupations:	Managerial/professional	25.2	29.2	18.6	31.9
	Technical/sales/administrative	16.3	12.5	8.5	17.6
	Service occupations	13.2	10.4	13.6	7.4
	Farming/forestry/fishing	5.2	6.3	–	1.0
	Precision production/craft/repair	3.8	2.1	6.8	4.4
	Operations/fabricators/laborers	9.3	8.3	6.8	11.8
	Students	4.3	2.1	45.8	26.0
	Housewives	2.0	–	–	–
	Other	20.7	29.2	–	–

Appendix 2

Satisfaction with overall and life domains "How do you fell about your life as a whole?" (Life Overall) "How do you fell about the areas of your life that are listed below?" (Life Domains)

	U.S.A. (Hampton Rds.) (N = 640)		U.S.A. (Floyd) (N = 57)		Australia (Woll.1) (N = 67)		Australia (Woll. 2) (N = 240)		Pooled sampled (N = 957)	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Your life as a whole	5.74	1.05	5.94	1.36	5.95	1.00	5.76	1.23	5.76	1.11
Your job situation	5.02	1.44	6.29	1.52	6.29	1.91	5.26	1.45	5.11	1.45
Your financial situation	4.79	1.49	5.03	1.54	4.80	1.37	4.94	1.39	4.83	1.46
Your health	5.48	1.21	5.58	1.60	5.43	1.18	5.51	1.30	5.49	1.25
Your education	5.49	1.14	5.85	1.21	5.48	1.45	5.31	1.28	5.44	1.18
Your friends and associates	5.62	1.13	5.85	1.19	6.03	1.08	5.86	1.13	5.71	1.14
Your leisure life	5.35	1.23	5.28	1.42	5.61	1.27	5.49	1.30	5.40	1.26
Your neighborhood	5.22	1.23	5.91	1.24	5.53	1.16	5.39	1.35	5.33	1.26
Your community	5.27	1.10	5.91	1.32	5.52	1.06	5.28	1.20	5.32	1.14
Your spiritual life	5.45	1.22	5.91	1.31	5.80	1.67	5.27	1.31	5.43	1.26
Your environment	4.89	1.35	5.89	1.17	4.65	1.58	4.64	1.46	4.86	1.40
Your housing situation	5.60	1.24	5.78	1.20	5.49	1.49	5.81	1.07	5.65	1.22
Your cultural life	5.10	1.21	5.28	1.30	5.78	1.36	5.35	1.26	5.20	1.23
Your social status	5.27	1.16	5.62	1.31	5.96	1.27	5.36	1.14	5.32	1.15
Government services	4.55	1.26	5.18	1.57	4.47	1.64	4.45	1.35	4.53	1.31
Business services	4.96	1.15	4.96	1.48	4.85	1.23	4.88	1.21	4.92	1.18
Nonprofit services	4.75	1.13	5.17	1.57	5.14	1.37	4.81	1.25	4.79	1.18

Note: The response scale is as follows:

8 = never thought about it *or* don't have opinion *or* doesn't apply (counted as missing)
7 = delighted
6 = pleased
5 = mostly satisfied
4 = mixed feelings
3 = mostly dissatisfied
2 = unhappy
1 = terrible

Appendix 3

Satisfaction with government services "How do you feel about the Town (City/County) Government Services provided by the Town of (City/County) that are listed below?"

	U.S.A. (Hampton Rds.) (N = 624)		U.S.A. (Floyd) (N = 57)		Australia (Woll.1) (N = 67)		Australia (Woll. 2) (N = 240)	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Fire services	5.63	0.92	5.85	1.34	6.02	1.23	5.71	1.04
Rescue services	5.73	1.03	5.57	1.75	6.02	1.24	5.70	1.15
Library services	5.40	1.20	5.85	1.97	5.51	1.98	5.65	1.21
Sanitation/refuse services	4.54	1.38	5.89	1.43	5.50	1.21	5.57	1.21
Water services	4.29	1.66	5.80	1.58	5.19	1.66	5.19	1.32
Postal services	5.15	1.33	5.57	1.98	5.88	0.94	5.63	1.22
Police services	5.19	1.27	5.35	1.84	5.50	1.18	4.95	1.61
Voter registration	–	–	5.70	1.65	5.32	1.61	5.19	1.31
Motor registration	–	–	4.30	2.10	5.03	1.89	4.87	1.57
Public health services	4.79	1.42	5.42	1.67	4.09	1.95	4.36	1.58
Town administration	3.79	1.41	5.14	1.82	4.00	1.61	4.24	1.43
County administration	3.79	1.41	4.30	1.85	3.40	1.61	4.01	1.37
Planning for land use	–	–	4.56	2.30	4.56	2.20	3.84	1.42
Economic development	4.26	1.35	4.33	2.35	3.79	2.26	3.78	1.41
Parks and recreation	5.22	1.25	4.98	2.21	5.07	1.47	5.04	1.31
Employment/job assistance	3.91	1.37	4.23	2.77	3.85	2.43	3.67	1.54
Beautification	4.54	1.37	5.22	1.64	5.16	1.55	4.82	1.32
Street lighting	4.54	1.37	5.14	1.82	4.62	1.68	4.76	1.48
Public safety	4.80	1.27	–	–	–	–	–	–
Cost of utilities	3.55	1.56	–	–	–	–	–	–
Public education	4.34	1.59	–	–	–	–	–	–
Real estate taxes	3.39	1.53	–	–	–	–	–	–

Note: The response scale is as follows:

8 = never thought about it *or* don't have opinion *or* doesn't apply (counted as missing)
7 = delighted
6 = pleased
5 = mostly satisfied
4 = mixed feelings
3 = mostly dissatisfied
2 = unhappy
1 = terrible

Since government services are found in some communities but not in others, no attempt was made to pool data across the four samples. What was pooled was the composite scores computed as the average of satisfaction scores weighted by perceived importance of each service.

Appendix 4

Satisfaction with business services "How do you feel about the business services in the Town (City/County) of ___ that are listed below?"

	U.S.A. (Hampton Rds.) (N = 624)		U.S.A. (Floyd) (N = 57)		Australia (Woll.1) (N = 67)		Australia (Woll. 2) (N = 240)	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Banking/savings services	5.34	1.08	5.80	1.21	5.24	1.45	4.73	1.49
Insurance services	5.09	1.22	5.71	1.15	5.22	1.45	4.57	1.31
Taxi/private transportation	–	–	4.94	2.49	5.26	1.78	4.83	1.29
Restaurants/night clubs	5.28	1.27	3.84	2.30	5.83	1.71	5.03	1.12
Department stores	5.11	1.38	3.56	2.52	5.07	1.43	5.16	1.17
Drug stores/supermarkets	5.31	1.35	4.35	2.00	5.65	1.20	5.59	1.06
Specialty stores	5.00	1.32	3.94	2.26	5.28	1.36	4.99	1.22
Healthcare services	–	–	4.71	2.09	4.73	1.81	4.81	1.45
Telephone services	5.05	1.28	5.67	1.42	4.73	1.55	5.23	1.24
Electricity services	5.01	1.29	5.77	1.30	5.43	1.28	5.56	1.07
Gas/oil services	–	–	5.73	1.60	6.15	1.42	5.35	1.07
Real estate services	–	–	5.21	2.16	5.68	1.76	4.89	1.24
Home repair services	–	–	4.80	1.95	5.37	1.89	4.71	1.26
Day care services	4.52	1.23	5.60	2.43	6.78	1.95	4.25	1.34
Nursing homes/retirement community-type services	–	–	5.62	1.57	5.83	1.75	4.68	1.57
Private schools	–	–	5.87	2.35	6.57	1.91	4.82	1.51
Product quality	–	–	5.50	2.04	5.14	1.87	4.63	1.10
Spectator sports	4.13	1.52	–	–	–	–	–	–
TV stations	4.91	1.31						
Radio stations	5.25	1.21						
Local newspaper	4.52	1.65	–	–	–	–	–	–
Automobile care services	4.63	1.44	–	–	–	–	–	–
Realtors	4.85	1.26	–	–	–	–	–	–
Investment services	4.96	1.13	–	–	–	–	–	–
Legal services	4.71	1.42	–	–	–	–	–	–
Entertainment	5.10	1.42	–	–	–	–	–	–

Note: The response scale is as follows:

8 = never thought about it *or* don't have opinion *or* doesn't apply (counted as missing)

7 = delighted
6 = pleased
5 = mostly satisfied
4 = mixed feelings
3 = mostly dissatisfied
2 = unhappy
1 = terrible

Since business services are found in some communities but not in others, no attempt was made to pool data across the four samples. What was pooled was the composite scores computed as the average of satisfaction scores weighted by perceived importance of each service.

Appendix 5

Satisfaction with non-profit service "How do you feel about the Town (City/County) of ___ services listed below?"

	U.S.A. (Hampton Rds.) (N = 624)		U.S.A. (Floyd) (N = 57)		Australia (Woll.1) (N = 67)		Australia (Woll. 2) (N = 240)	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Alcohol/drug services	4.50	1.20	5.34	2.22	6.07	2.14	4.30	1.51
Crisis intervention services	4.57	1.18	5.58	2.33	6.38	1.94	4.27	1.55
Adoption/foster care services	4.25	1.22	6.07	2.41	6.67	1.70	4.26	1.38
Family planning services	4.27	1.24	6.16	2.27	6.68	1.69	4.68	1.40
Religious services	5.45	1.11	6.40	1.13	5.84	1.58	5.17	1.24
Support groups	4.70	1.17	5.76	2.10	6.06	1.67	4.81	1.39
Chamber of commerce	4.65	1.17	5.92	1.71	5.61	2.23	4.61	1.21
Legal aid services	–	–	6.25	1.68	5.87	2.14	4.56	1.54
Mental retardation services	4.55	1.29	6.07	2.08	6.54	1.91	4.30	1.63
Senior citizen services	4.68	1.34	6.00	1.72	5.89	1.60	5.07	1.48
Adult education	4.92	1.24	5.76	1.93	5.84	1.54	5.27	1.19
Food/shelter programs	4.52	1.31	5.60	1.91	6.25	1.91	4.71	1.56
Hospice/nursing services	4.75	1.29	5.34	2.29	5.95	1.63	4.90	1.60
Services for the handicap	4.60	1.28	5.46	2.39	5.96	1.99	4.57	1.69
Volunteer services	4.93	1.14	5.57	1.86	6.04	1.41	5.21	1.39
Youth services	–	–	5.10	2.23	5.82	1.88	4.40	1.65
Cultural/leisure services	4.91	1.26	4.83	2.27	5.49	1.65	4.69	1.37
Local colleges	5.10	1.21	–	–	–	–	–	–

Note: The response scale is as follows:

8 = never thought about it *or* don't have opinion *or* doesn't apply (counted as missing)
7 = delighted
6 = pleased
5 = mostly satisfied
4 = mixed feelings
3 = mostly dissatisfied
2 = unhappy
1 = terrible

Since nonprofit services are found in some communities but not in others, no attempt was made to pool data across the four samples. What was pooled was the composite scores computed as the average of satisfaction scores weighted by perceived importance of each service.

Appendix 6

Perceived importance of government services "How important or unimportant are the same government services?"

	U.S.A. (Hampton Rds.) (N = 624)		U.S.A. (Floyd) (N = 57)		Australia (Woll.1) (N = 67)		Australia (Woll. 2) (N = 240)	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Fire services	6.48	0.71	6.56	1.10	6.56	1.16	6.56	1.04
Rescue services	6.46	0.73	6.56	1.11	6.48	1.20	6.39	1.12
Library services	5.66	1.07	5.51	1.39	5.66	1.18	5.41	1.33
Sanitation/refuse	5.98	1.06	6.15	1.35	6.37	1.17	6.33	0.97
Water services	6.11	1.06	6.22	1.48	6.33	1.20	6.24	1.06
Postal services	6.03	0.87	6.16	1.56	6.31	1.16	6.25	0.96
Police services	6.49	0.77	6.36	1.17	6.46	1.31	6.62	1.03
Voter registration	–	–	5.23	1.21	5.03	1.55	4.89	1.41
Motor registration	–	–	5.79	1.13	5.35	1.54	5.40	1.30
Public health services	6.19	1.07	5.76	1.24	6.37	1.36	6.42	1.05
Town administration	5.50	1.40	5.73	1.48	5.40	1.59	5.48	1.26
County administration	5.50	1.40	5.82	1.50	5.40	1.74	5.38	1.44
Planning for land use	–	–	5.74	1.15	5.57	1.63	5.59	1.41
Economic development	5.67	1.29	5.84	1.54	5.98	1.51	5.75	1.43
Parks and recreation	5.64	1.03	5.36	1.35	5.71	1.09	5.84	1.19
Employment/job assistance	4.90	1.78	5.69	1.56	6.12	1.52	5.79	1.64
Beautification	5.75	1.05	5.37	1.23	5.34	1.25	5.44	1.31
Street lighting	5.75	1.05	5.55	1.35	5.96	1.34	5.86	1.20
Public safety	6.28	0.90	–	–	–	–	–	–
Cost of utility	5.96	1.30	–	–	–	–	–	–
Public transportation	4.63	1.68	–	–	–	–	–	–
Public education	6.03	1.37	–	–	–	–	–	–
Real estate taxes	5.55	1.47	–	–	–	–	–	–

Note: The response scale is as follows:

7 = of utmost importance
6 = very important
5 = somewhat important
4 = so/so
3 = somewhat unimportant
2 = very unimportant
1 = of no importance whatsoever

Since government services are found in some communities but not in others, no attempt was made to pool data across the four samples. What was pooled was the composite scores computed as the average of satisfaction scores weighted by perceived importance of each service.

Appendix 7

Perceived importance of business services "How important or unimportant are the same business services?"

	U.S.A. (Hampton Rds.) (N = 624)		U.S.A. (Floyd) (N = 57)		Australia (Woll.1) (N = 67)		Australia (Woll. 2) (N = 240)	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Banking/savings services	5.83	0.93	6.11	1.38	6.31	0.94	6.09	0.98
Insurance services	5.52	1.12	5.88	1.05	5.75	1.16	5.39	1.21
Taxi/private transportation	–	–	4.37	1.72	5.31	1.43	5.15	1.44
Restaurants/night clubs	5.24	1.20	5.40	1.53	4.48	1.38	4.52	1.39
Department stores	5.37	1.00	5.37	1.48	5.41	1.23	5.47	1.08
Drug stores/supermarkets	5.86	0.93	6.07	1.15	5.96	1.07	5.95	0.99
Specialty stores	4.93	1.17	5.15	1.50	4.98	1.33	4.97	1.05
Healthcare services	–	–	5.96	1.52	6.49	1.02	6.43	0.94
Telephone services	5.85	0.99	6.33	0.91	6.31	0.90	6.29	0.90
Electric services	1.02	1.06	6.38	0.85	6.45	0.99	6.36	0.92
Gas/oil services	–	–	5.79	1.34	5.59	1.68	5.43	1.57
Real estate services	–	–	5.61	1.78	4.54	1.42	4.55	1.51
Home repair services	–	–	5.84	1.00	5.15	1.22	5.29	1.39
Day care services	3.19	2.23	4.69	2.06	4.86	2.14	4.94	2.01
Nursing homes/retirement community-type services	–	–	5.67	1.60	5.95	1.55	5.49	1.82
Private schools	–	–	3.39	1.83	4.05	2.07	4.12	1.95
Realtors	4.24	1.52	–	–	–	–	–	–
Investment services	4.67	1.66	–	–	–	–	–	–
Legal services	4.76	1.48	–	–	–	–	–	–
Entertainment	4.98	1.32	–	–	–	–	–	–
Spectator sports	4.34	1.70	–	–	–	–	–	–
TV stations	5.30	1.12	–	–	–	–	–	–
Radio stations	5.34	1.10	–	–	–	–	–	–
Local newspaper	5.46	1.25	–	–	–	–	–	–
Automobile care services	5.65	1.16	–	–	–	–	–	–

Note: The response scale is as follows:

7 = of utmost importance
6 = very important
5 = somewhat important
4 = so/so
3 = somewhat unimportant
2 = very unimportant
1 = of no importance whatsoever

Since government services are found in some communities but not in others, no attempt was made to pool data across the four samples. What was pooled was the composite scores computed as the average of satisfaction scores weighted by perceived importance of each service.

Appendix 8

Perceived importance of non-profit services "How important or unimportant are the services?"

	U.S.A. (Hampton Rds.) (N = 624)		U.S.A. (Floyd) (N = 57)		Australia (Woll.1) (N = 67)		Australia (Woll. 2) (N = 240)	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Alcohol/drug abuse services	4.46	1.96	5.21	1.65	5.01	2.19	5.04	2.02
Crisis intervention services	4.48	1.92	5.19	1.56	4.82	2.24	5.01	1.93
Adoption/foster care services	4.05	1.99	4.74	1.70	4.53	2.14	4.57	1.96
Family planning services	4.05	2.04	4.86	1.98	4.43	2.18	4.61	2.04
Religious services	5.43	1.53	6.10	1.40	4.78	1.76	4.55	1.78
Support groups	4.66	1.87	5.52	1.52	4.88	1.87	5.88	1.07
Chamber of commerce	4.91	1.50	5.28	1.52	4.32	4.32	5.04	1.71
Legal aid services	–	–	5.32	1.59	5.16	2.04	5.07	1.76
Mental retardation services	4.49	1.89	5.38	1.36	4.94	2.32	4.79	2.06
Senior citizen services	5.17	1.69	5.80	1.29	5.44	1.93	5.44	1.69
Adult education	5.38	1.40	5.56	1.50	5.45	1.63	5.41	1.53
Food/shelter programs	4.80	1.81	5.48	1.52	5.00	2.12	4.96	1.96
Hospice/nursing services	4.96	1.78	5.45	1.56	5.66	1.84	5.63	1.71
Services for the handicap	4.90	1.76	5.68	1.49	5.14	2.30	5.22	2.05
Volunteer services	5.10	1.53	5.45	1.48	5.31	1.91	5.39	1.67
Youth services	5.13	1.70	5.72	1.40	4.95	2.15	5.19	1.83
Cultural/leisure services	5.14	1.44	5.62	1.39	5.00	1.70	4.87	1.66
Local colleges	5.63	1.39	–	–	–	–	–	–

Note: The response scale is as follows:

7 = of utmost importance
6 = very important
5 = somewhat important
4 = so/so
3 = somewhat unimportant
2 = very unimportant
1 = of no importance whatsoever

Since nonprofit services are found in some communities but not in others, no attempt was made to pool data across the four samples. What was pooled was the composite scores computed as the average of satisfaction scores weighted by perceived importance of each service.