

## Congruence among Objective and Subjective Quality-of-Life (QOL) Indicators

*Madhukar G. Angur, Robin Widgery, Sudhir G. Angur*

### Abstract

*This exploratory study addresses the value of subjective and objective indicators of neighborhood quality-of-life. Both types of indicators are found to be significantly correlated with resident evaluations of overall neighborhood quality. Subjective indicators of neighborhood conditions are more highly correlated to overall neighborhood quality (also subjective), than are objective indicators of neighborhood conditions. Various explanations have been offered to explain why there may be incongruence between the objective and subjective methods of examining the quality of neighborhood life. It is suggested that both types of indicators have value for decision makers.*

### INTRODUCTION

The challenges to life in many American cities today range from eroding tax bases and unemployment to the dissolution of family life and growing neighborhood violence. These and a legion of associated problems have projected themselves in the public psyche with such intensity that many believe the quality of life in America is waning. Accompanying this concern has been the question: How shall the quality of life be measured? Many scholars have focused their concern on the individual, examining satisfaction with life or well-being. Others have focused on the living conditions of the individual in the neighborhood, the city, and the country.

In this line of research it has been found that attitudes toward the quality of city life in general are importantly influenced by attitudes toward the quality of life in the neighborhood (Widgery, 1978; Widgery, 2004). The concern here is the neighborhood, that geography considered by most individuals as their nearest psychic space beyond the home. Those who have examined the quality of city life have worked in two general paths. One group (Angur & Widgery, 2002; Lui, 1976; Flax, 1976) has examined "objective indicators" such as the condition of houses, the number of swimming pools, demographics, and economics. Another group (Gurin, et al., 1960; Bradburn, 1969; Campbell, 1976; Andrews & Withey, 1976; Widgery, 1982; & Widgery, 2004) has pursued "subjective indicators" of

life quality, such as satisfaction, perception, commitment, aspirations, and motivation. The former path assumes that objective (quantitative) measures are appropriate, while the latter assumes that quality can best be measured by examining the subjective (qualitative) experience.

Both of these investigative traditions no doubt have complementary value in assessing life quality. There is, however, a marked need to understand the relationship that may exist between the various objective and subjective indicators. Objective indices have been attacked as being poorly correlated with perception of and satisfaction with life quality. For instance, is the presence of a swimming pool a satisfactory indicator of the owner's quality of life? To one swimming pool owner it may represent prestige and success, making him feel better about himself and his life generally. To another, the pool may represent a burden of time, energy and money. It is not uncommon to find the symbols of affluence accompanied by great dissatisfaction and frustration, or very humble conditions where much happiness prevails.

When individuals differ in their perceptions of the same objects and conditions, how are these perceptions to be reconciled and interpreted? The objective approach in measuring life quality has its limitations, but the subjective method can be criticized as a "soft measure," someone's feelings about a condition within the environment, and not the condition itself. Can the

two methods be used with equal validity and reliability as measures of quality of life? Can one be a surrogate for the other? If so, there should be a high and significant correlation between them. Several studies have found that the relationship between the objective and subjective indices can vary greatly. Campbell, et al. (1976) found a very high correlation ( $r = .84$ ) between the perceived racial mix of the respondents' neighborhood and objective measures of the mix. In a study of lake water quality in northern Michigan, Marans, et al. (1976) found that correlations between these conditions and resident evaluations ranged from .01 to .76. In two studies of urban services (Schuman & Gruenberg, 1974; Stipak, 1977), found that the correlations between the provision of services and citizen evaluations were not great. One of these researchers found the relationships between subjective judgments and objective characteristics "all modest in size," and some "trivial" (Stipak, 1977).

After studying the quality of life in large American cities, Schneider (1975) concluded, "there appears to be no evidence at all that, as measured by currently popular indicators, the objective social conditions of cities has any relationship with the levels of subjective life quality of their citizens." These contrary findings leave the question still unresolved, and beg other research to address the issue. The purpose of this study is to reexamine the relationships between objective and subjective measures. *Several of both types of indicators of neighborhood quality were correlated with an overall measure of satisfaction with the quality of neighborhood life.* Using this approach it has been hypothesized that: 1) objective indicators are significantly correlated with subjective indicators; and 2) both objective and subjective indicators are significantly correlated with overall satisfaction with neighborhood quality.

## RESEARCH METHOD

This research has combined the data from two major studies of the quality of neighborhood life in Flint, Michigan (population 160,000 at the time of the studies). The first study was conducted in 1974 over a six-month period (ECHO, 1974). This research consisted of a lot by lot, block by block, "wind-

shield survey" of physical conditions in every neighborhood. Survey personnel were trained to note several conditions which were, or were not, present on each lot: house deterioration, rubble, trash and litter, and home vacancy. The second study was a telephone survey conducted in 1977-78 among 3,000 households (Widgery, 1978). This survey included 100 randomly—selected households from each of 30 neighborhoods, measuring interviewee satisfaction with eight aspects of neighborhood life: overall neighborhood quality, neighbors, home, aesthetic quality, government services, security from crime, racial mix, and schools. Each of these neighborhoods reflected the boundaries of the elementary school districts within the city.

The boundaries of the 30 Flint neighborhoods coincided for both the objective study (1974) and the subjective one (1977-78). These boundaries had defined the neighborhood school districts for more than a generation, and were generally accepted as the common way of identifying city neighborhoods. The two data sets were merged in order to examine relationships between actual physical conditions in the neighborhoods and the attitudes and perceptions of residents toward those physical conditions. Scores for each neighborhood on the objective variables were added to the records of each interviewee contacted in the subjective study. In all, 3,000 records were augmented in this way, assigning to each interviewee the scores for the physical conditions in the interviewee's neighborhood.

## RESULTS

In weighing the relationships between objective and subjective indicators of neighborhood life, a simple correlation analysis was performed among all variables. (See Table I.) Though overall neighborhood satisfaction is significantly correlated with all other indicators ( $-.27$  to  $.44$ ), the other subjective indices do not correlate as strongly with the objective indicators as they do among themselves. Although generally weaker than other correlations in the matrix, significant relationships do exist between the objective variables and satisfaction with home, government services, and security against crime. The coefficients

are not significant among objective indicators and satisfaction with neighbors, aesthetic quality, racial mix of neighborhood, and neighborhood school.

To give a general impression of these relationships, a matrix (Table II) was created using composite subjective and objective indexes. This table shows that both objective and subjective variables significantly relate to overall neighborhood satisfaction ( $p < .01$ ). However, the objective and subjective indices show a weaker, though significant, relationship to one another

( $p < .05$ ). To examine these relationships in a way that would account for scale differences among the independent variables, a multiple regression model was employed using beta coefficients as predictors of overall satisfaction with neighborhood quality. (See Table III.) Using the stepwise method, 10 of the 11 independent variables were significant predictors. Together these account for 47% of the variance. Of this, only 5.7% is due to the effect of the three objective predictors. The balance of the predictive weight (41.3%) is accounted for by the seven subjective variables.

**Table I**  
**Correlation Matrix for Objective and Subjective Indicators**

	1	2	3	4	5	6	7	8	9	10	11	12
1 Satisfaction w/Neighborhood	1.00											
2 Neighbors	.44*	1.00										
3 Home	.41*	.23*	1.00									
4 Aesthetics	.36*	.18*	.20*	1.00								
5 Government Service	.43*	.31*	.32*	.25*	1.00							
6 Security from Crime	.43*	.38*	.23*	.29*	.36*	1.00						
7 Racial Mix of Neighborhood	.34*	.36*	.13	.16*	.21*	.36*	1.00					
8 Educational System	.31*	.28*	.23*	.21*	.38*	.20*	.18*	1.00				
9 % Homes Deteriorated	-.27*	-.07	-.19*	-.04	-.15	-.10	-.02	-.01	1.00			
10 % Homes with Rubble	-.27*	-.07	-.17*	-.05	-.17*	-.12	-.03	-.02	.74*	1.00		
11 Homes w/Trash	-.34*	-.13	-.21*	-.09	-.19*	-.20*	-.09	-.06	.65*	.74*	1.00	
12 % Homes Vacant	-.31*	-.13	-.18*	-.09	-.18*	-.21*	-.13	-.10	.34*	.59*	.65*	1.00

\* = ( $p < .05$ )  $x = .65$

**Table II**  
**Correlation Matrix Using Composite Objective and Subjective Indicators**

	1	2	3
1. Objective	1.00		
2. Subjective	-.19*	1.00	
3. Overall Satisfaction	-.30**	.64**	1.00

\* = ( $p < .05$ );  $r = .165$

\*\* = ( $p < .01$ );  $r = .232$

**Table III**  
**Best Predictors of Overall Satisfaction With the Quality of Neighborhood Life**

Subjective Predictors ( $R^2 = .413$ )	Beta Coefficients
Satisfaction - Neighbors	.19
Satisfaction - Home	.17
Satisfaction - Aesthetic Quality	.17
Satisfaction - Security against Crime	.12
Satisfaction - Government and Community Service	.11
Satisfaction - Racial Mix of Neighborhood	.11
Satisfaction - Educational System	.06
Objective Predictors ( $R^2 = .057$ )	
Percent of Homes Deteriorated	.10
Percent of Homes with Trash and Litter	.08
Percent of Homes Vacant in Neighborhood	.07

**Total  $R^2 = .470$**

**DISCUSSION**

This research has found significant relationships between objective and subjective indicators of overall quality of neighborhood life. Moreover, the objective measures are related to resident satisfaction with home, government services, and security from crime. The objective indicators defined either the negative condition of homes and property, or the degree of vacancy. Each was a visible manifestation of the degree of resident neglect or abuse. Such conditions when observed by residents probably have a halo effect on other neighborhood evaluations. For instance, vacant homes in an area may create doubt in residents' minds about the value of their own homes. By inference, concern with security from crime in the neighborhoods is intensified as neglect and abuse of property spread. It is noteworthy that, though significant, objective indicators are less strongly correlated with overall neighborhood quality than are the subjective variables (see Table III). It may be argued that such subordinate status for objective measures in this study casts doubt on the overall value of using them to infer neighborhood quality. Such an argument ought to consider other reasons for the relatively low relationships between the physical conditions and the perceptual and evaluative realms (see Tables I & II).

Several explanations for this relatively low relation-

ship can be offered. There may be various intervening variables interacting between the "real world" and human perception. Such intervening elements may be found in differing aspiration levels or expectations by the observer of the objective world (Campbell, et al., 1976; Diener, 1984). Low aspiration level may explain why an individual whose objective situation is undoubtedly poor may have a relatively high level of satisfaction. Those having high aspirations for themselves and high expectations from life, yet living in poor circumstances, will have a low level of satisfaction. The individual's own standards of comparison are similar to this explanation. Residents moving into a grim industrial area from a more beautiful non-industrial community may experience greater dissatisfaction with the new city than others who have lived there all their lives. The attractiveness of the earlier community had conditioned the new resident to accept beauty and order as a norm of urban life.

Festinger's social comparison theory can also offer a reasonable explanation (1954). In his view, people are more likely to judge their own circumstances by the prevailing conditions among others who are perceived as similar to them. Another explanation for the weak (yet statistically significant) congruence between objective and subjective indicators may be the notion of accommodation (Campbell, et al., 1976; Brickman, et

al., 1978; Brickman & Campbell, 1971). The longer one lives with a particular situation the more one “settles in,” becoming comfortable with a previously undesirable situation. This may help explain why a study found higher levels of satisfaction with neighborhood indicators among older residents (Widgery, 1978). Lee and Marans (1980) explored the scale discordance explanation. They found that congruence among objective and subjective indicators was stronger when the neighborhoods in question were small, leaving less ambiguity as to the boundaries of the area being evaluated. With the greater uncertainty of the exact geography in question, correlations between the objective and subjective are more likely to be low.

### **RECOMMENDATIONS ON METHODS**

Even with significant levels of correlation, it is somewhat disturbing that the levels reported here are not high (in an absolute sense) among the specific objective and subjective indicators. Two possible reasons for this may be cited: time and space. The time between the data collection for the two surveys was more than four years. Also, those interviewed for the subjective survey were asked about their attitudes and perceptions of their neighborhoods, without specifically defining the actual boundaries (the space) of their neighborhood. Researchers relied on the respondents’ own mental maps of their neighborhoods, not on clearly defined neighborhood boundaries. In future research to examine the objective/subjective relationship, both of these issues (time and space) should be addressed. Ideally, these studies should be concurrent. The interviewers should provide respondents with well-defined boundaries for their neighborhoods. Using the telephone interview method compounds this problem. In-home interviews, during which the interviewer shows respondents a map defining neighborhood boundaries, would be a more appropriate method. Variation of this method ought to be in place when conducting similar studies in developing countries.

### **RECOMMENDATIONS ON SUBSTANCE**

The focus of this research has been on environmental issues. Do the perceptions of residents correspond

to the actual conditions of the neighborhood? And do these two variables (perceptions and conditions) provide reliable predictors of overall satisfaction with the neighborhood? Other dimensions of community life ought to be examined. Social and economic conditions, government services and personal and family life: All should be the foci for the objective/subjective research model. Accompanying this research will surely be the concomitant problem: How shall we operationalize the objective variables? For instance, in the case of measuring the delivery of social services, may we validly use a relative measure of size of budget for a particular service?

Subjective indicators may be measured through the use of standard attitude, opinion, and perception scales. We may ask respondents how satisfied they are with their family life, but how shall we examine, objectively, the quality of that “family life?” Shall we ask respondents the number of times in the past year that they experienced major family conflict, considered divorce, or felt significant financial stress? Although these issues certainly affect quality of life, they may be quite difficult to quantify in an objective manner. An important problem in quality-of-life studies is the confounding of quantity and quality indicators. Should quality be inferred from the percent of Black residents in a community, or the proportion of homes having swimming pools (both quantitative indicators)? Or, should quality be measured by the degree of satisfaction (a subjective indicator) people derive from living in a community?

Physical (objective) indicators have long been used as measures of community quality. Underlying these measures is an assumption that material possessions, or conditions, define quality of life. Can we assume that satisfaction with life quality naturally results from a high “standard of living”? People of modest means may be very satisfied with their lot, while the wealthy may be miserable with theirs. If this is true, the ultimate indicator of life’s quality should be satisfaction derived from life, not the examination of material circumstances. Yet, as in many areas of scientific research, direction of causality comes into question. Is the subjective (level of satisfaction) formed by the objective (conditions), or does one’s proneness to feel

satisfaction in life form the perceptions of conditions in the environment (the objective)? Are individuals naturally motivated to see the cup as half full, and not half empty; to see the doughnut, and not the hole?

Whether because of personality, culturally induced values, or an intrinsic need, the perception of conditions (the objective) may spring from the subjective (attitudes). If this is so, do all individuals share this proneness? If not, then the expectancy of high correlations between objective and subjective indicators will continue to be inconsistent. If personality, values and need are intervening variables, the direction of causality will not be found directly by examining conditions and attitudes independently. Another equally important question is whether the indicators of community life are the same for developed and developing economies. What differences in perceptions, if any, exist among respondents' assessments?

## POLICY IMPLICATIONS

In the past decade significant economic dislocation has seriously affected the quality of life in many American cities. In hopes of rejuvenating their local economies, these communities have found that they must now market themselves in order to attract new companies as sites for expansion and relocation. Packaging an entire community so that it may present itself in the most positive way to prospective client firms requires a convincing argument that the area's quality of life is attractive. Many of these cities are industrialized, with a "rust belt" image working against them. Companies desiring to relocate or to site a new plant, while giving primary consideration to economic factors that will give them cost advantages, look very carefully at quality-of-life factors as well. They examine those attributes that are most important to their personnel who will be employed in the new operation. Marketing strategies based solely on projecting the "physical community" (number of shopping centers, libraries and colleges) may be ill conceived unless they communicate important subjective dimensions as well. For instance, how much satisfaction (and pride) do residents feel about their community, their neighborhoods, schools, and institutions? How satisfied are they with their current jobs and employers? How committed are

they to continue living in the community? How does their commitment translate to such things as community pride, involvement and leadership? These and many other subjective elements may speak volumes to those who are responsible for assessing the city's quality of life.

## SUMMARY

The implications of these findings are useful to those who participate in making public policy. Although there is a statistically significant degree of congruence between objective and subjective indicators of neighborhood quality, these levels of relatedness do not engender confidence that objective indicators alone can be considered reliable measures of satisfaction with the quality of life. Other subjective indicators ought to be used, including those measuring various social and personal dimensions.

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## ABOUT THE AUTHORS

**Dr. Madhukar Angur** is a David M. French Distinguished Professor at the University of Michigan Flint School of Management. Dr. Angur has published extensively in various business and marketing journals in many areas. Some of his work has appeared in *Industrial Marketing Management*, *International Journal of Business Research*, *Journal of Marketing Management*, *Journal of Advertising Research*, *OMEGA-International Journal of Management Science*, *Journal of American Academy of Business*, *International Journal of Bank Marketing*, among others. Dr. Angur serves on the board of many companies in the manufacturing and service sectors, and is a consultant for many national and international corporations. Dr. Angur has received many honors and recognitions. He is listed in Who's Who among Americas Teachers and was nominated twice for the Carnegie Foundation Professor of the Year Award.

**Dr. Robin Widgery** received his doctorate from Michigan State University in 1971. He spent 30 years on the faculties of General Motors Institute (now Kettering University), and the University of Michigan on the Flint campus, teaching management, marketing, and organizational behavior. He now serves as CEO

for Social Systems Research Institute in Flint, Michigan. For better than twenty-five years he has directed research within many Fortune 500 corporations, using feedback and problem solving strategies to encourage quality-of-life improvements in the workplace. He has written more than 100 articles, monographs, book chapters, and scholarly papers. Some of these have appeared in such publications as the *Journal of Regional Analysis and Policy*, *Journal of Leadership Studies*, *Management Review*, *Journal of the American Academy of Business*, *Journal of Counseling Psychology*, *Journal of Advertising Research*, *American Journal of Community Psychology*, *Communication Quarterly*, and *Journal of Communication* among others.

**Sudhir G. Angur** is a Founder President of Alliance Business Academy, a premier business school in India, and a *Marketing Resources Corporation Distinguished Professor of Marketing* at the Alliance Business Academy, Bangalore. Professor Angur holds an MBA from the prestigious Indian Institute of Management, Ahmedabad, India and an undergraduate degree (B.Tech) in Electrical Engineering from the Indian Institute of Technology, Mumbai, India. Professor Angur has worked in world-class companies in various capacities in engineering and management.