M. JOSEPH SIRGY and TERRI CORNWELL

FURTHER VALIDATION OF THE SIRGY ET AL.'S MEASURE OF COMMUNITY QUALITY OF LIFE

(Accepted 11 May 2001)

ABSTRACT. Sirgy et al. (2000) have developed a measure of community quality of life (QOL). This measure captures residents' satisfaction with community-based services in the way that these services contribute to global satisfaction with the community and overall life satisfaction. The measure was validated nomologically by testing hypotheses directly deduced from a theoretical model that relates residents' satisfaction with community-based services with global community satisfaction and global life satisfaction. The study reported in this paper replicates and extends Sirgy et al.'s (2000) study. Specifically, the conceptual model that was used to test the nomological (predictive) validity of the community QOL measure was further expanded and refined. The modified measure is based on the theoretical notion that satisfaction with the community at large (global community satisfaction) is mostly determined by satisfaction with government services (police, fire/rescue, library, etc.), business services (banking/savings, insurance, department stores, etc.), nonprofit services (alcohol/drug abuse services, crisis intervention, religious services, etc.), as well as satisfaction with other aspects of the community such as quality of the environment, rate of change to the natural landscape, race relations, cost of living, crime, ties with people, neighborhood, and housing. In turn, global community satisfaction together with satisfaction with other overall life domains (work, family, leisure, etc.) affect global life satisfaction. Survey data from a variety of communities located in southwest Virginia were collected to further test the nomological validity of the measure. The results provided additional nomological validation support to the community QOL measure.

INTRODUCTION

Sirgy, Rahtz, Cicic, and Underwood (2000) have developed a community-based QOL measure based on a theoretical model shown in Figure 1. The model makes the distinction between "community" and "other" life domains, both contributing to perceived QOL (global life satisfaction). The community life domain pertains to one's perception of one's overall community.

Social Indicators Research **56:** 125–143, 2001.

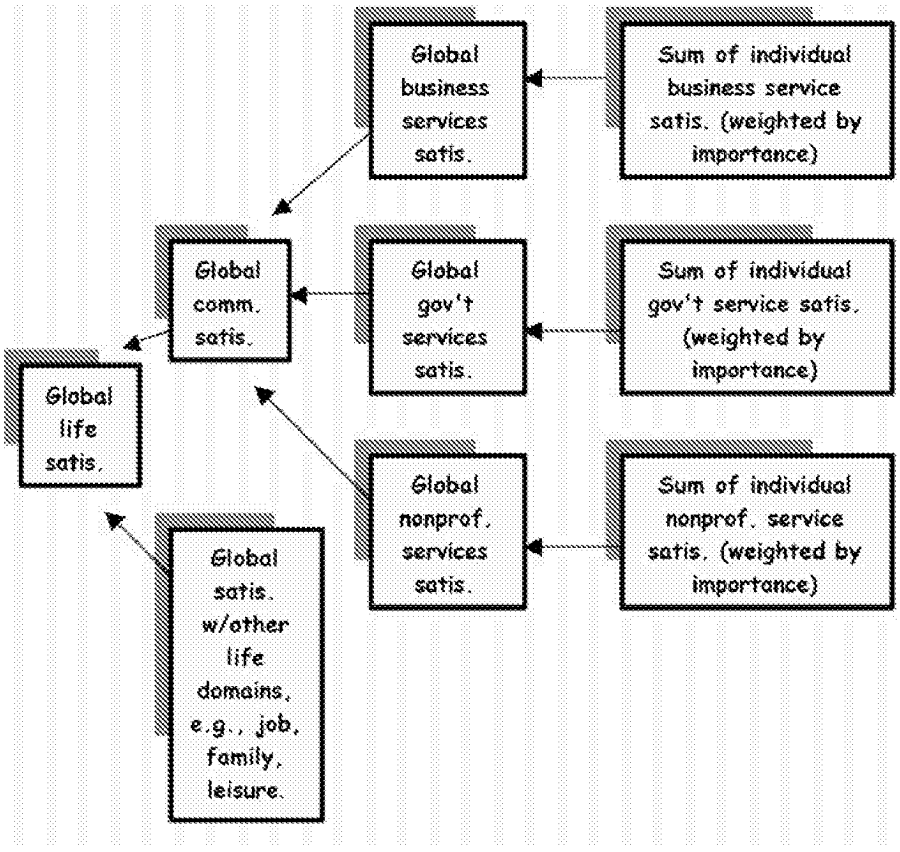

Figure 1. Sirgy et al's (2000) original model on how satisfaction with individual business, government, and nonprofit services in a community impacts the quality of life.

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, neighborhood, among others (e.g., Andrews and Withey, 1976; Campbell, Converse and Rodgers, 1976). The model treats global satisfaction with community as determinants of global life satisfaction above and beyond the effects of global satisfaction with job, family, leisure, finance, health, education, friends, culture, social status, spiritual life, and home.

Global satisfaction with community was hypothesized to be a function of global satisfaction with government, business, and

nonprofit services. In turn, global satisfaction with government services was hypothesized to be a function of satisfaction with specific government services perceived to be important. Similarly, global satisfaction with business and nonprofit services were hypothesized to be a function of satisfaction with specific (business and nonprofit) services perceived to be important.

The relationship between satisfaction with individual government, business, and nonprofit services and global life satisfaction was explained using the *bottom-up spillover theory* (Andrews and Withey, 1976; Campbell et al., 1976; Diener, 1984). The basic premise of bottom-up theory is that life satisfaction is functionally related to satisfaction with all of life's domains and sub-domains. 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 life, 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, 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.

Thus, Sirgy et al. argued 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, they hypothesized that there is an indirect relationship 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 1.

The authors used the logic of multiattribute attitude models (e.g., Fishbein and Ajzen, 1975) in predicting and explaining satisfaction. That is, a resident's satisfaction with government services in the community, for example, is a direct function of the sum (or average) of the resident's evaluations of the various and specific government services, moderated by the perceived importance of each service. The same logic was applied to the determinants of global satisfaction with business services and global satisfaction with nonprofit services.

Thus, global satisfaction with community was postulated to be a function of global satisfaction with government services, business services, and nonprofit services. Global satisfaction with government services was hypothesized to be a function of 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 was hypothesized to be a function of the sum (or average) of satisfaction with individual nonprofit services (e.g., 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 was hypothesized to be a function of 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. These hypotheses were empirically tested in a study involving four samples from four communities. The study results supported the hypotheses and thus lent support for the nomological (predictive) validity of the community QOL measures. By the same token, the results of the Sirgy et al.'s study suggested that the model may better fit the data given the following four modifications:

1. There is high multicollinearity among other life domain satisfaction constructs (e.g., job, family, leisure, among others).

Hence, regressing global life satisfaction against satisfaction with individual life domains produces results indicating that satisfaction with only certain life domains account for significant variability in global life satisfaction scores. A solution around the multicollinearity problem would be to compute a composite index of satisfaction with all other life domains by summing or averaging the satisfaction scores across all other life domains (other than community).

2. Global community satisfaction is predicted not only by satisfaction with business, government, and nonprofit services but also by satisfaction with other life domains.
3. There is high multicollinearity among the three services satisfaction constructs (global business services satisfaction, global government services satisfaction, and global nonprofit services satisfaction) suggesting the possibility of combining these three services satisfaction into one construct, which can be referred to as "sum of global services satisfaction."
4. Global community satisfaction predicts the sum of global services satisfaction. That is, there is a reciprocal link between these two constructs.

Figure 2 shows the suggested model based on the results of the Sirgy et al.'s study. Consistent with the original model (shown in Figure 1), the suggested model (shown in Figure 2) posits that global life satisfaction is a direct function of global community satisfaction and a composite of the sum of satisfaction scores from other life domains. The model also suggests that global community satisfaction is a direct function of the sum of global services satisfaction as well as satisfaction with other life domains. Finally, the sum of global services satisfaction is influenced by composite business services satisfaction, composite government services satisfaction, and composite nonprofit services satisfaction, as well as global community satisfaction.

We proposed yet other improvements to the model based on theoretical considerations (see Figure 3). These are:

1. Theoretically speaking, one can argue that the *weighted* domain satisfaction scores (as well as the sum of the weighted scores) are likely to add significantly to the predictive variance of global life satisfaction than raw satisfaction scores. In other words, if

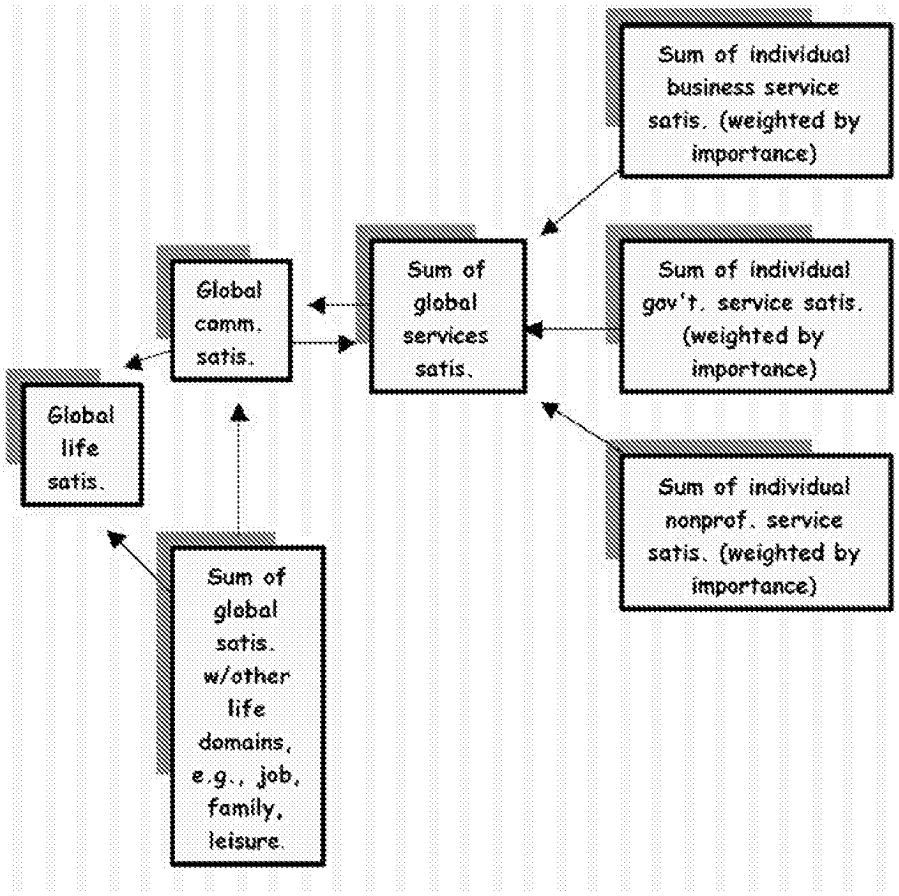

Figure 2. Sirgy et al.'s (2000) suggested model (based on data) on how satisfaction with individual business, government, and nonprofit services in a community impacts the quality of life.

we obtain measures of residents' perceived importance of these life domains, then we can adjust the satisfaction score of a given life domain by the perceived importance of that domain. Thus, the weighted satisfaction scores of the various life domains should predict global life satisfaction better than satisfaction scores alone. The logic here is borrowed from the multiattribute attitude models (e.g., Fishbein and Azjen, 1975). Hence, we expect that global life satisfaction would be better predicted by global community satisfaction and the sum of global satisfaction

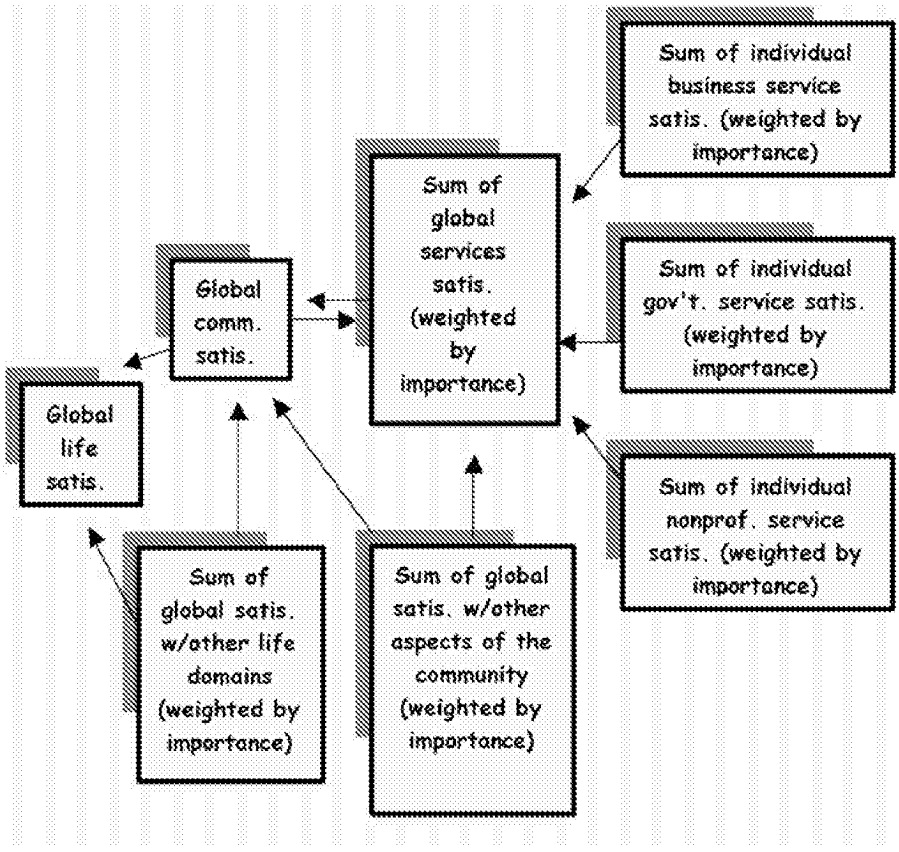

Figure 3. A further theoretically-improved model.

with other life domains (weighted by the perceived importance of each life domain).

2. Global satisfaction with community is also expected to be better predicted by a composite of services satisfaction (sum of the weighted global satisfaction with business, government, and nonprofit services – weighted by the perceived importance of business, government, and nonprofit services in general). Again, the theoretical logic here is borrowed from the multiattribute attitude models (e.g., Fishbein and Azjen, 1975).
3. Global community satisfaction is affected by other factors besides global satisfaction with business, government, and nonprofit services. These other factors are: (a) quality of the environment in the community (air, water, land, etc.), (b) rate

of change to the natural landscape (deforestation, housing/commercial development, (c) loss of agricultural land, ridge-line development, etc.), (d) race relations in the community, (e) cost of living in the community, (f) crime in the community, (g) ties with people in the community, (h) one's neighborhood, and (i) one's housing situation. We identified these factors from the literature in community psychology (e.g., Campbell, Converse and Rodgers, 1976; Bruin and Cook, 1997; Dahmann, 1981, 1983; Galster, 1987; Galster and Hesser, 1981; Lansing, Marans and Zehner, 1970; Lee and Guest, 1983; Vrbka and Combs, 1993; Yockey, 1976). Hence, we capture satisfaction with these other aspects of the community by a construct involving the sum of global satisfaction with other aspects of the community (weighted by perceived importance of each aspect).

Based on the aforementioned modifications to the model, our new and improved model is shown in its entirety in Figure 3. From this refined model, we can deduce the following hypotheses:

- *Hypothesis 1*: Global life satisfaction is a direct function of two factors: (a) global community satisfaction and (b) the sum of global satisfaction with other life domains – weighted by the perceived importance of each life domain.
- *Hypothesis 2*: Global community satisfaction is a direct function of three factors: (a) the sum of global satisfaction with government services, business services, and nonprofit services – weighted by the perceived importance of these services in relation to other community aspects, (b) the sum of global satisfaction with quality of the environment in the community (air, water, land, etc.), rate of change to the natural landscape (deforestation, housing/commercial development, loss of agricultural land, ridge-line development, etc.), race relations in the community, cost of living in the community, crime in the community, ties with people in the community, one's neighborhood, and one's housing situation – weighted by the perceived importance of those community aspects, and (c) the sum of global satisfaction with other life domains – weighted by the perceived importance of each life domain.
- *Hypothesis 3*: The sum of global satisfaction with government services, business services, and nonprofit services weighted

by the perceived importance of these services in relation to other community aspects) is a direct function of four factors: (a) the sum of satisfaction with individual business services (e.g., banking/savings, insurance, restaurants, etc.) – weighted by the perceived importance of those business services, (b) the sum of satisfaction with individual government services (e.g. fire, rescue, library, etc.) – weighted by the perceived importance of those government services, (c) the sum of satisfaction with individual nonprofit services (e.g., alcohol/drug abuse, crisis intervention, adoption/foster care, etc.) – weighted by the perceived importance of those nonprofit services, (d) the sum of global satisfaction with quality of the environment in the community (air, water, land, etc.), rate of change to the natural landscape (deforestation, housing/commercial development, loss of agricultural land, ridge-line development, etc.), race relations in the community, cost of living in the community, crime in the community, ties with people in the community, one's neighborhood, and one's housing situation – weighted by the perceived importance of those community aspects, and (e) the sum of global satisfaction with other life domains – weighted by the perceived importance of each life domain.

We put forth the aforementioned hypotheses, because providing empirical support for them would provide additional nomological (predictive) validation of Sirgy et al.'s measures of community QOL.

METHOD

Sampling and Sample Characteristics

A sample from a variety of communities located in 12 counties in Western Virginia was used in this study. The goal was 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.

The study was based on a mail survey. A mailing list of 3,200 households located in the designated 12 counties was purchased from a marketing mailing list house. The cover page informed potential respondents that this survey was commissioned by an economic development group well known in the region and that results would be made available to community leaders to assist in developing programs and policies to enhance community quality of life. Two hundred questionnaires were returned undelivered, and 380 were returned with completed questionnaires. Around 30 completed questionnaire arrived after the deadline for data coding and therefore were not included in the final data set. The final response rate was estimated at 13 percent.

Survey Measures

The refined model (as shown in Figure 3 and articulated through hypotheses 1 through 3) 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;
- Satisfaction with community aspects such as government services in general, business services in general, nonprofit services in general, quality of the environment in the community (air, water, land, etc.), the rate of change to the natural landscape (deforestation, housing/commercial development, loss of agricultural land, ridge-line development, etc.), race relations in the community, cost of living in the community, crime

in the community, ties with people in the community, one's neighborhood, and one's housing situation;
- Satisfaction with life domains such as community, job, family, financial, health, education, friends/associates, leisure, cultural life, social status, spiritual life, and home; and
- Satisfaction with life in general.

All satisfaction measures were single indicators in which 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.' " For example, global life satisfaction was measured by asking the respondent to answer the following question: "How do you feel about your life as a whole?"

The survey questionnaire also contained measures of perceived importance corresponding to all satisfaction constructs (see list above). All perceived importance measures were single indicators in which responses were captured using the following rating scale: 7 (of utmost importance), 6 (very important), 5 (somewhat important), 4 (so/so), 3 (somewhat unimportant), 2 (very unimportant), and 1 (of no importance whatsoever). For example, importance of police services was measured through the following question: "How important or unimportant are police services in your community?"

RESULTS

The model shown in Figure 3 was tested through path analysis (using LISREL). These are shown in Table I. The goodness-of-fit statistics show the model fitting the data quite well [X^2 (df = 28) = 1,431.46; RMR = 0.064; Standardized RMR = 0.014; GFI = 1.00; Adjusted GFI = 0.98]. This model had much better good-of-fit statistics than the Sirgy et al.'s revised model of Figure 2 [X^2 (df = 25) = 116.81; RMR = 0.30; Standardized RMR = 0.06; GFI = 0.97; Adjusted GFI = 0.89].

TABLE I

Results of the hypothesis testing

Dependent variable	Multiple R-square	Independent variables	Maximum likelihood	Goodness-of-fit statistics
				X^2 (df = 28) = 1,431.46 RMR = 0.064 Standardized RMR = 0.014 GFI = 1.00 Adjusted GFI = 0.98
Life	0.51	Community	0.22 (5.33)	
		All others L	0.097 (11.16)	
Community	0.465	Services	0.039 (3.72)	
		All others C	0.026 (2.12)	
		All others L	0.11 (12.53)	
Services	0.55	Business svc.	0.41 (6.28)	
		Gov't svc.	0.46 (7.20)	
		Nonprofit svc.	0.23 (3.94)	
		All others C	0.20 (3.21)	
		Community	−0.42 (−1.42)	

Notes: Figures in parentheses are *t*-values.
Legend:
Life = global life satisfaction.
Community = global community satisfaction.
All others L = sum of global satisfaction of all other life domains – weighted by perceived importance of each life domain.
Services = sum of global satisfaction with business, government, and nonprofit services – weighted by perceived importance of each type service.
All others C = sum of global satisfaction with other community aspects – weighted by perceived importance of each community aspect.
Business svc. = sum of satisfaction with individual business service – weighted by perceived importance of each business service.
Government svc. = sum of satisfaction with individual government services – weighted by perceived importance of each government service.
Nonprofit svc. = sum of satisfaction with individual nonprofit services – weighted by perceived importance of each nonprofit service.

Results Pertaining to Hypothesis 1 (H1)

H1 states that *global life satisfaction is a direct function of two factors: (a) global community satisfaction and (b) the sum of global satisfaction with other life domains – weighted by the perceived importance of each life domain.* The maximum likelihood results

shown in Table I indicate support for this hypothesis. Global community satisfaction was found to be a significant predictor of global life satisfaction (maximum likelihood estimate = 0.22, *t*-value = 5.33). The sum of global satisfaction with other life domains (weighted by perceived importance) was also found to be a significant predictor of global life satisfaction (maximum likelihood estimate = 0.097, *t*-value = 11.16). As shown in the table, both factors accounted for more than 51 percent of the variance in global life satisfaction scores. Sirgy et al.'s revised model (Figure 2) was able to account for 48 percent of the variance in global life satisfaction. Therefore, we can conclude that our model (Figure 3) did equally or better than Sirgy et al.'s model.

Results Pertaining to Hypothesis 2 (H2)

H2 states that *global community satisfaction is a direct function of three factors: (a) the sum of global satisfaction with government services, business services, and nonprofit services – weighted by the perceived importance of these services in relation to other community aspects, (b) the sum of global satisfaction with quality of the environment in the community (air, water, land, etc.), rate of change to the natural landscape (deforestation, housing/commercial development, loss of agricultural land, ridgeline development, etc.), race relations in the community, cost of living in the community, crime in the community, ties with people in the community, one's neighborhood, and one's housing situation – weighted by the perceived importance of those community aspects, and (c) the sum of global satisfaction with other life domains – weighted by the perceived importance of each life domain.* The path analysis results as shown in Table I indicate that these three factors are indeed significant predictors of global community satisfaction (maximum likelihood estimates are 0.039, 0.026, and 0.11, respectively; all being significant below the 0.05 level). The three factors combined accounted for 46.5 percent of the variance in global community satisfaction. Sirgy et al.'s revised model (Figure 2) was able to account for 30 percent of the variance in global life satisfaction. Therefore, we can conclude that our model (Figure 3) did better.

Results Pertaining to Hypothesis 3 (H3)

H3 states that *the sum of global satisfaction with government services, business services, and nonprofit services (weighted by the perceived importance of these services in relation to other community aspects) is a direct function of four factors: (a) the sum of satisfaction with individual business services (e.g., banking/savings, insurance, restaurants, etc.) – weighted by the perceived importance of those business services, (b) the sum of satisfaction with individual government services (e.g. fire, rescue, library, etc.) – weighted by the perceived importance of those government services, (c) the sum of satisfaction with individual nonprofit services (e.g., alcohol/drug abuse, crisis intervention, adoption/foster care, etc.) – weighted by the perceived importance of those nonprofit services, (d) the sum of global satisfaction with quality of the environment in the community (air, water, land, etc.), rate of change to the natural landscape (deforestation, housing/commercial development, loss of agricultural land, ridge-line development, etc.), race relations in the community, cost of living in the community, crime in the community, ties with people in the community, one's neighborhood, and one's housing situation – weighted by the perceived importance of those community aspects, and (e) the sum of global satisfaction with other life domains – weighted by the perceived importance of each life domain.*

The results of H3 are reported in Table I. As hypothesized, the Services variable (the sum of global satisfaction with government services, business services, and nonprofit services – weighted by the perceived importance of these services in relation to other community aspects) was significantly predicted by the Business svc. variable (sum of satisfaction with individual business services – weighted by the perceived importance of those business services) [maximum likelihood = 0.41, t-value = 6.28]. Similarly, as hypothesized, the Services variable was significantly predicted by the Gov't svc. variable (sum of satisfaction with individual government services – weighted by the perceived importance of those government services) [maximum likelihood = 0.46, t-value = 7.20]. The Services variable also was significantly predicted, as expected, by the Nonprofit svc. variable (sum of satisfaction with individual nonprofit services – weighted by the perceived importance

of those nonprofit services) [maximum likelihood = 0.23, *t*-value = 3.21]. The All others C variable [sum of global satisfaction with quality of the environment in the community (air, water, land, etc.), rate of change to the natural landscape (deforestation, housing/commercial development, loss of agricultural land, ridge-line development, etc.), race relations in the community, cost of living in the community, crime in the community, ties with people in the community, one's neighborhood, and one's housing situation – weighted by the perceived importance of those community aspects] also turned out to be a significant predictor of the Services variable (maximum likelihood = 0.20, *t*-value = 3.21), as expected. However, not expected was the lack of significance of Services being a function of Community (maximum likelihood = −0.42, *t*-value = −1.42). Given the finding that Community does not have any influence on Services, we revised our model by eliminating this relationship from the overall model. The final revised model is shown in Figure 4. We ran another LISREL analysis on the final-modified model to make sure that the goodness-of-fit statistics are satisfactory (see Table II). The five independent variables (Business svc., Gov't svc., Nonprofit svc., All other C, and Community) accounted for 55 percent of the variance in Services.

As shown in Table II, the good-of-fit statistics did not change much [X^2 (df = 28) = 1,431.46; RMR = 0.16; Standardized RMR = 0.017; GFI = 0.99; Adjusted GFI = 0.98] proving that the model with the link from Community to Services is not important to the overall integrity of the model. Without Community, the percent of the variance accounted for in Services was 56 Service compared to 55 when Community was among the predictors. Therefore, we conclude that model shown in Figure 4 is the model that is theoretically and empirically most appealing.

CONCLUSION

The results of this study provide additional nomological (predictive) validity to the community QOL measure developed originally by Sirgy et al. The measure focuses on capturing satisfaction/dissatisfaction with three community-based services, namely business, government, and nonprofit services. Satisfaction/dissatisfaction

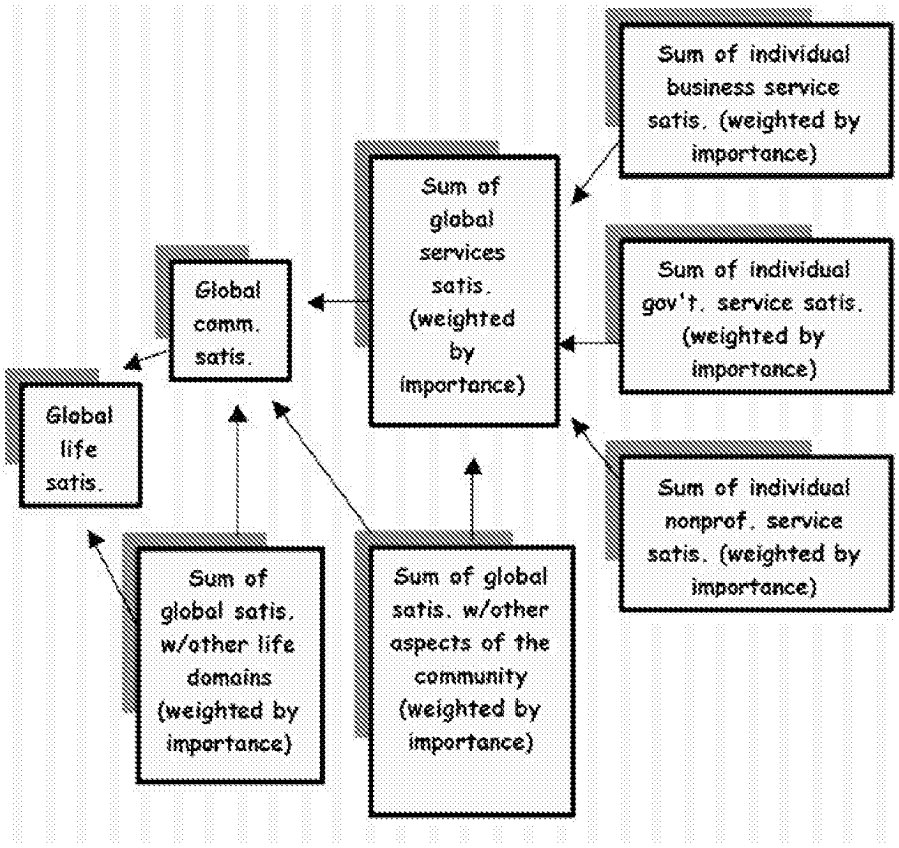

Figure 4. The final-modified model.

scores are weighted by perceived importance of these services. Both studies (Sirgy et al.'s and the current study) have clearly demonstrated that satisfaction/dissatisfaction with community-based services (weighted by perceived importance) play a significant role in overall life satisfaction of community residents. This role is mediated by a bottom-up spillover in which attitude toward important community-based services affect global satisfaction with community services. Global satisfaction with community services in conjunction with satisfaction with other aspects of the community (e.g., cost of living, racial relations, crime rate, neighborhood, and housing) affect global satisfaction with the community at large. Global community satisfaction, in conjunction with satisfaction

TABLE II

Results of testing the finally-modified model

Dependent variable	Multiple R-square	Independent variables	Maximum likelihood	Goodness-of-fit statistics
				X^2 (df = 28) = 1,431.46 RMR = 0.16 Standardized RMR = 0.017 GFI = 0.99 Adjusted GFI = 0.98
Life	0.51	Community	0.22 (5.32)	
		All others L	0.097 (11.12)	
Community	0.47	Services	0.029 (3.65)	
		All others C	0.012 (2.80)	
		All others L	0.11 (12.70)	
Services	0.56	Business svc.	0.40 (6.24)	
		Gov't svc.	0.46 (7.22)	
		Nonprofit svc.	0.22 (3.74)	
		All others C	0.17 (2.93)	

Notes: Figures in parentheses are *t*-values.
Legend:
Life = global life satisfaction.
Community = global community satisfaction.
All others L = sum of global satisfaction of all other life domains – weighted by perceived importance of each life domain.
Services = sum of global satisfaction with business, government, and nonprofit services – weighted by perceived importance of each type service.
All others C = sum of global satisfaction with other community aspects – weighted by perceived importance of each community aspect.
Business svc. = sum of satisfaction with individual business service – weighted by perceived importance of each business service.
Government svc. = sum of satisfaction with individual government services – weighted by perceived importance of each government service.
Nonprofit svc. = sum of satisfaction with individual nonprofit services – weighted by perceived importance of each nonprofit service.

with other life domains (e.g., job, family, and leisure), affect overall life satisfaction.

Community leaders are urged to use the community QOL measure to identify strategic gaps in community programs and services. The measure affords community leaders to identify business, government, and nonprofit services that community residents

perceive as important and cause dissatisfaction. Take corrective action to enhance satisfaction with these services should enhance the overall life satisfaction of the community residents.

ACKNOWLEDGEMENTS

The authors of this paper would like to acknowledge the contribution of Don R. Rahtz, Muris Cicic, Robert Underwood, and Dennis Cole for previous efforts related to the original measure of which this study is based on.

REFERENCES

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

Bruin, M. J. and C. C. Cook: 1997, 'Understanding constraints and residential satisfaction among low-income single-parent families', Environment and Behavior 29(4), pp. 532–553.

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

Dahmann, D. C.: 1981, 'Subjective indicators of neighborhood quality', in Denis F. Johnston (ed.), Measurement of Subjective Phenomena (US Government Printing Office: Washington, D.C.), pp. 97–118.

Dahmann, D.: 1983, 'Subjective assessment of neighborhood quality by size of place', Urban Studies (20), pp. 31–45.

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

Fishbein, M. and I. Ajzen: 1975, Belief, Attitude, Intention, and Behavior (Addison-Wesley: Reading, MA).

Galster, G.: 1987, Homeowners and Neighborhood Reinvestment (Duke University Press, Durham, NC).

Galster, G. and G. Hesser: 1981, 'Residential satisfaction: Contextual and compositional correlates', Environment and Behavior (November) 16, pp. 737–758.

Lansing, J., R. Marans and R. Zehner: 1970, Planned Residential Environments (Institute for Survey Research, University of Michigan, Ann Arbor.

Lee, B. and A. Guest: 1983, 'Determinants of Neighborhood satisfaction: A metropolitan-Level nalysis', Sociological Quarterly (Spring) 24, pp. 287–303.

Sirgy, M. J., D. Rahtz, M. Cicic and R. Underwood: 2000, 'A method for assessing residents' satisfaction with community-based services: A quality-of-life perspective', Social Indicators Research 49, pp. 279–316.

Vrbka, S. J. and E. R. Combs: 1993, 'Predictors of neighborhood and community satisfactions in rural communities', Housing and Society 20(1), pp. 41–49.
Yockey, K. M.: 1976, Residential Alterations and Additions and Housing-Neighborhood Satisfaction. M.S. thesis, Iowa State University, Ames Iowa.

Department of Marketing
Pamplin College of Business, Virginia Tech
Blacksburg, VA 24061-0236
USA