

Measuring Satisfaction

Irma O'Dell

Teara Archwamety

ABSTRACT

The purpose of the present study was to determine what predicts community life satisfaction in rural communities. The study also examined if the relative measure of satisfaction yields similar results to the absolute measure. Two questionnaires were used in this study. The first was used to determine perceived community life satisfaction (absolute measure). The second questionnaire examined expected satisfaction and actual satisfaction (relative measure). General conclusions based on this study were: (a) important predictors of community life satisfaction vary as a function of community size, and (b) measuring satisfaction using a discrepancy score (relative measure) is as effective as its absolute measure counterpart.

Measuring and Predicting Community Satisfaction

A person's "Community life satisfaction" is the overall perception of well-being that the person derives from living within a community. There are many possible components (or domains) of community life satisfaction. Past researchers have tried to identify, organize, and categorize these components or indicators of life satisfaction (see, for examples, Rojeck, Clementes & Summers, 1975 ; Marans & Rodgers, 1975 ; Kennedy, Northcott & Kinzel, 1977 ; Ladewig & McCann, 1980 ; Allen & Beattie, 1984 ; Vreugdenhil & Rigby , 1987 ; and Commins, 1996). Of the many components of community life satisfactions, some may be perceived as more " important" than others by residents. Ladewig and McCann (1980) compared ratings of different components of community satisfaction. Results from their study indicated high to low rating (5 point scale) in the following areas : income 3.43, politics 3.32, recreational opportunity 3.28, obedience to the laws 3.23, government 3.13, opportunities for the elderly 2.97, opportunities for younger people 2.93, and welfare programs 2.90.

Predictors of community life satisfaction

What components are better predictors of overall satisfaction? Several researchers have studied this question in the last two decades. Blake, Weigl, and Perloff (1975) investigated three dimensions underlying perception of community satisfaction and found "personal relations" the best predictor, "recreation dimension" second best, and "maintenance" third best.

Kennedy, Northcott, and Kinzel (1977) investigated community satisfaction with six domains (economic, health, neighborhood, friends, recreation, and education). Results indicated that the "recreation" dimension placed fourth in predicting community satisfaction--behind friends, economic, and health dimensions.

In studies by Crohn (1982), van Es and Schneider (1983), Allen and Beattie (1984), and O'Dell (1992) economics is a powerful influence on community satisfaction. Community involvement and social opportunities as indicated by Marans and Dillman (1980), Crohn (1982), and O'Dell (1992) are significant predictors of community life satisfaction.

Of the studies reviewed, the Allen and Beattie (1984) findings appeared to be the most comprehensive in terms of the identification of various components of community life satisfaction. There were seven dimensions identified (economics, environment, formal education, leisure, social opportunities and community involvement, public services, and medical services). Results indicated economic, leisure, and environment to be significant predictors of overall community life satisfaction with "leisure" being the best predictor. However, the Allen and Beattie sample was drawn from a northern central town in the U.S. with a population of about 13,000. If smaller

towns were studied, leisure may not be the best predictor or even significant predictor of community satisfaction. Research comparing small towns with bigger cities has shown certain important differences. Prezza and Costantini (1998), for example, found that sense of community and life satisfaction are higher in smaller towns than in midsized and large cities. **One purpose of the present study is to examine if the Allen and Beattie (1984) findings will remain consistent when applied to rural towns with populations between 300 to 2500.** Rural is considered communities with 2500 people or less.

Measuring satisfaction

Previous studies have reflected controversies in measuring satisfaction. There are two possible ways to measure satisfaction. The first method involves measuring satisfaction as an "absolute index" (direct). This measurement utilizes a direct rating of satisfaction. For example, a question may ask "how satisfied are you?" The individual responds among several choices : extremely satisfied, very satisfied, satisfied, dissatisfied, very dissatisfied, extremely dissatisfied. Most studies on community life satisfaction employ this "absolute" measure approach (e.g., Tinsley, Barrett & Kass, 1977 ; Hawes, 1979; London, Crandall & Fitzgibbons, 1979; Allen & Beattie, 1984).

In contrasting the first method described in the previous paragraph the second method involves measuring satisfaction as a "relative index" (indirect). This approach utilizes an actual level which is compared to a desired level. The discrepancy between the actual level and the desired (goal or expected) level is the measured satisfaction. Very few studies investigating community life satisfaction use this measuring approach. Francken and van Raaij (1981) used this approach to measure satisfaction with leisure time usage. They measure satisfaction with leisure time as the discrepancy between the actual time spent on leisure activities and the desired time. According to Francken and van Raaij (1981) this desired time may be the individual's expectations as derived from earlier experiences, the individual's achievements in other sphere of life, or the perceived level of satisfaction others derive from the leisure activities.

No study has been located that compared the two measures of satisfaction directly in a research project. The present study will address this issue.

Using a relative approach to measure community satisfaction, an individual could be asked prior to moving into a community, how satisfied with the community he/she expects to be. After the individual moves into the community the question could be asked is he/she actually satisfied with the community. The difference between the expected level of satisfaction and the actual level of satisfaction could then be considered a measure of satisfaction. If the expected level is higher than the actual level of satisfaction there is disappointment--a state of high dissatisfaction. If the expected level is lower than the actual level of satisfaction there is pleasant surprise-- a state of high satisfaction. This relative approach to index of satisfaction will result in a wider range of measurement compared with the absolute index counterpart.

For example, if a resident rates his/her absolute satisfaction with the community on a six point scale (extremely satisfied, very satisfied, satisfied, dissatisfied, very dissatisfied, and extremely dissatisfied) the possible scores will be from 1 (extremely dissatisfied) to 6 point (extremely satisfied), a range of only six points. However, if community satisfaction is measured as a relative index, i.e., actual satisfaction minus expected satisfaction, the possible scores will range from -5 to +5 (a range of eleven points). When a person rates the expected satisfaction on a six-point scale before becoming a resident and then rates the actual satisfaction on the same six-point scale after becoming a resident the greatest disappointment will have a value of -5 (in the case of actual satisfaction = 1 and expected satisfaction = 6). The most pleasant surprise will have a value of +5 (in the case of actual satisfaction = 6 and expected satisfaction = 1).

Although the relative concept is seldom used, it may be the better approach. Measuring satisfaction as a relative index does have merit. First, it might sound philosophically appealing to people, especially the relativists who believe that all knowledge or perception is relative. A relativist may conclude that a relative index of satisfaction is a truer measure of satisfaction than an absolute index.

Second, measuring satisfaction as a relative index is theoretically-based. It is based on the theory of "expectancy violation." According to this theory, if an event is perceived to be more positive than expected (positive violation), this will result in more favorable outcomes. However, if an event is perceived to be more negative than expected (negative violation), it will produce more unfavorable conditions (see Koerner & Petelle, 1991; Jussim, Coleman & Lerch, 1987 ; Bettencourt, Dill, Greathouse, Charlton & Mulholland, (1997). The theoretical construct "negative violation" would correspond to a high rating of satisfaction before but a lower rating of satisfaction after. On the other hand, the construct "positive violation" would correspond to a low rating of satisfaction before but a higher rating of satisfaction after.

The second purpose of the present study is to examine if a relative measure of community life satisfaction will be as adequate as an absolute measure in the quest for important predictors of community life satisfaction as described above.

To summarize, there are two purposes of this study. The first purpose is to determine what predicts community satisfaction in rural communities. The second purpose is to determine if the relative measure yields similar results to the absolute measure of community satisfaction.

Method

Sample

The study sample was obtained from towns in Nebraska with population more than 300 and less than 2,500 residents in the fall of 1991. The state of Nebraska was divided into four geographical areas (northwest, northeast, southwest, and

southeast) based on population density. Computer generated random numbers were used to randomly select three towns from each area. The telephone directories for the selected towns were used. From each directory, sixty names were drawn randomly through another use of computer generated random numbers. Thus a total of 720 individuals constituted the random sample of the present study (60 per town). A slightly modified version of the "Element of Community Life Scale" questionnaire developed by Allen and Beattie (1984) was mailed to each of the 720 individuals randomly selected. This questionnaire was used to address the first purpose of the study which examine if the Allen and Beattie findings on order of important predictors of community life satisfaction will remain similar when applied to small towns of population between 300 to 2500. This questionnaire will be described in the next section. Of the 720 questionnaires mailed with one follow-up, 493 questionnaires were returned, constituting a return rate of 68.5%.

Of the 493 individuals who returned the first questionnaire, 122 individuals had resided in the communities ten or fewer years. These 122 respondents were mailed a second questionnaire called Community Life Satisfaction Scale. The items used in this second questionnaire were indential to those in the first questionnaire. However, the manner in which the respondents marked the items was different from the first questionnaire. The second questionnaire was used to address the second purpose of the present study which is to examine if an absolute measure of community life satisfaction will yield similar results as a relative measure in the quest for important predictors of community satisfaction. This second questionnaire will be described in the next section. Of the 122 second questionnaires mailed, 113 were returned, constituting a return rate of 92.6%.

Instruments

The first questionnaire (Elements of Community Life Scale) mentioned above consists of 33 items grouped into seven dimensions. Each of the seven dimensions and its elements (items) are listed in the following:

1. Medical service dimension-- hospital and medical facilities, medical doctors, dentists, and emergency services. (Cronbach's Alpha = 0.83)
2. Formal education dimension -- college/ university courses (for credit), public schools, technical and/or vocational training for career development. (Cronbach's Alpha = 0.54)
3. Environment dimension -- cleanliness (air, water, soil), general appearance of the community, climate, and weather. (Cronbach's Alpha = 0.63)
4. Economic dimension -- cost of living, job opportunities, housing (cost and availability), utilities (water, gas, electricity, sewage), and shopping facilities. (Cronbach's Alpha = 0.63)
5. Public service dimension -- local government, public transportation to and from other communities, road and highways, public health service, fire protection,

police protection, welfare and social services (public assistance). (Cronbach's Alpha= 0.70)

6. Citizen involvement and social opportunities dimension --opportunities, citizen input into community decision. (Cronbach's Alpha = 0.61)

7. Leisure dimension -- publicly funded recreation, private and commercial recreation, adult education (noncredit), opportunities to interact with friends and relative with friends and relatives, and open park space. (Cronbach's Alpha = 0.62)

A six-point modified Likert scale was used to determine the respondents' rating of "satisfaction" for each element (item). The possible responses were: extremely dissatisfied, very dissatisfied, dissatisfied, satisfied, very satisfied, and extremely satisfied. An item was scored from one point to six points with six points being assigned to the "extremely satisfied" response. This score provide the "absolute" index of community satisfaction. For each of the seven dimensions, an average rating was then computed from its various elements or items, A final (34th) item in the questionnaire asked the respondents to rate on the same six-point scale their perceived "overall" satisfaction with the community life. This final item served as the dependent variable to be predicted from the seven dimensions of community life

The second questionnaire (Community Life Satisfaction Scale) consisted of the same 33 elements (items) plus one final element (item) as the first questionnaire. However, instead of simply asking the respondents to rate (on a six-point scale) the degree of "satisfaction" for each item, this second questionnaire asked the respondents to rate their "expected satisfaction" BEFORE they moved into the community and also to rate their "actual satisfaction" AFTER they moved into the community for each item. The same six-point rating was used (from "extremely dissatisfied" to "extremly satisfied"). The "expected satisfaction" rating was then subtracted from the "actual satisfaction" rating to yield a "discrepancy" score. This discrepancy score yielded by this second questionnaire is the "relative" index of community satisfaction as opposed to the "absolute" index yielded by the first questionnaire. An average score was then computed for each of the seven dimensions described above. These seven dimension scores were used to predict the "overall" satisfaction score consistent with the first questionnaire.

Results

A multiple regression analysis of the 493 returns from the first questionnaire (Elements of Community Life Scale -- "absolute" measure of community satisfaction), using the seven dimension ratings as the independent variables and the rating of "overall" satisfaction with the community life as the dependent variable, yielded the results presented in Table 1. Note that the economic and community involvement variables are significant predictors of the community life satisfaction. Note also that N=441, not 493, due to missing data.

Table 1 Multiple Regression Summary Analysis (N=441) for Seven Independent Variables and "Overall" Community Satisfaction ("Absolute" measure)

Source	df	SS	MS	F	R-Square
Regression	7	176.182	25.169	27.509 ***	0.308
Residual	433	396.162	.915		

Independent variable	Beta coefficient	t
Economic	.347	4.492 ***
Community Involvement	.142	1.972 *
Leisure	.059	.867
Formal Education	.054	.904
Medical Services	.046	.850
Public Services	-.027	-.373
Environment	-.001	-.015

***p < .001

* p < .05

A multiple regression analysis of the 113 returns from the second questionnaire (Community Life Satisfaction Scale -- "relative" measure of community satisfaction), using the seven dimension rating as the independent variables and the rating of "overall" satisfaction with the community life as the dependent variables yielded the results presented in Table 2. Note that the economic variable is the only significant predictor of community satisfaction. Note also that N=104, not 113, due to missing data.

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Table 2 Multiple Regression Summary Analysis (N=104) for Seven Independent Variables and "Overall" Community Satisfaction ("Relative" measure) of Residents Who Had Resided Ten or Fewer Years

Source	df	SS	MS	F	R-Square
Regression	7	13.210	1.887	2.561 *	0.157
Residual	96	70.751	.737		

Independent variable	Beta coefficient	t
Economic	.321	2.205 *
Community Involvement	-.102	-.873
Leisure	-.095	-.755
Formal Education	.215	1.827
Medical Services	.060	.486
Public Services	.070	.645
Environment	-.226	-1.781

* $p < .05$

Note that it is not quite appropriate to compare the multiple regression results in Table 1 with the multiple regression results in Table 2. The results in Table 1 were derived from "all" the respondents while the results in Table 2 were derived from respondents who had resided in the communities for only "ten or fewer" years. Since this much smaller subgroup received both questionnaires ("absolute" and "relative" measures of community satisfaction), it would be more appropriate to compare the multiple analysis results from the second questionnaires ("relative" measure) with the results from the first questionnaires ("absolute" measure) using only this subgroup. The multiple regression results of the first questionnaire considering only respondents who had resided in the community for "ten years or fewer" are presented in Table 3.

Table 3 Multiple Regression Summary Analysis (N=112) for Seven Independent Variables and "Overall" Community Satisfaction ("Absolute" measure) of Residents Who Had Resided Ten or Fewer Years

Source	df	SS	MS	F	R-Square
Regression	7	58.404	8.343	9.686 ***	0.419
Residual	94	80.969	.861		

Independent variable	Beta coefficient	t
Economic	.437	2.814 **
Community Involvement	.303	1.895
Leisure	.106	.809
Formal Education	-.126	-1.047
Medical Services	.062	.595
Public Services	-.034	-.222
Environment	-.090	-.723

*** p < .001

** p < .01

The ranking of "important" of the independent variables (or predictors) in predicting the "overall" community satisfaction for each of the three tables presented above, using beta coefficients as basis for judgment , is shown in Table 4.

Table 4 Ranking of Importance (Based on Beta Coefficients) of Independent Variables (Predictors) in Predicting the "Overall" Community Satisfaction in Three Analyses

Independent Variable (predictor)	All residents	10-or-fewer-yrs residents	
	rank (absolute measure)	rank (relative measure)	rank (absolute measure)
Economic	1st	1st	1st
Community Involvement	2nd	4th	2nd
Leisure	3rd	5th	4th
Formal Education	4th	3rd	3rd
Medical Services	5th	7th	6th
Public Services	6th	6th	7th
Environment	7th	2nd	5th

The Spearman rank correlation coefficient between the rank determined by "relative" measure and the rank determined by "absolute" measure among the 10-or-fewer-years residents was 0.714. The Spearman rank correlation coefficient between the rank determined by "absolute" measure among all residents and that among the 10-or-fewer-years residents was 0.857.

Discussion

One purpose of the present study is to examine if Allen and Beattie's (1984) findings on order of important predictors of community life satisfaction will remain "similar" when applied to small towns of population between 300 to 2500. They found leisure, environment, and economic to be significant predictors of overall community life satisfaction with "leisure" being the best predictor. Results of the present study indicated that there were two significant predictors of overall community life satisfaction, "economic" dimension ($p < .001$) and "community involvement" dimension ($p < .50$). Apparently, the economic dimension was the only common significant

predictor of overall community life satisfaction in both the Allen and Beattie's study and the present study. The ranking of important of this predictor was, however, different. The economic predictor ranked first in the present study but third in the Allen and Beattie's study. While the "leisure" dimension ranked first in Allen and Beattie's study, it ranked third in the present study (see Table 1). Also, whereas the "community involvement" dimension was a significant predictor in the present study it was NOT so in the Allen and Beattie's study. What may account for these differential findings?

The answer may be due to the fact that the Allen and Beattie's study involved a much larger town (population of about 13,000) but the present study involved much smaller towns (population between 300 and 2500) . It is common perception that small towns in rural areas have a slower pace of daily life. Under this condition leisure is more likely to be taken for granted and therefore plays a lesser role in accounting for or predicting overall community satisfaction. Economic dimension then becomes the fore front concern. In bigger towns or cities where the pace of life is much quicker, people may yearn for more leisure time. The "leisure" dimension may thus become the primary predictor of overall community satisfaction.

In larger towns and cities air pollution is more of vital importance to residents. The "environment" dimension is a significant predictor of overall community life satisfaction. With fresher air in small towns of rural areas, good environment is taken for granted, making it unlikely that the "environment" dimension will become a significant predictor of overall community life satisfaction.

Human are "social beings." However, small towns in rural areas are sparsely populated. The need to get together is therefore likely to be greater than in larger towns or cities. As a result, the "community involvement" dimension is more likely to become a significant predictor of community life satisfaction in small towns.

Another possible explanation for the difference in findings between the present study and that of Allen and Beattie (1984) lies in the fact that there is a separation of more than a decade between the two studies. It is quite likely that the rise in cost of living over the years has pushed the "economic" dimension to rank first as a predictor of community life satisfaction in the present study.

Another purpose of the present study is to examine if a "ralative" measure of community life satisfaction will be as strong as an "absolute" measure in the quest for important predictors of community life satisfaction. The answer to this question appears to be affirmative. Note that both the "relative" measure (see Table 2) and the "absolute" measure (see Table 3) yield very similar results. The "economic" dimension

is the only significant predictor of overall community life satisfaction. Moreover, when we examine the rank order of various predictors of overall community life satisfaction obtained by the "relative" measure against the rank order obtained by the "absolute" measure (see Table 4), we find that the agreement is impressive. The Spearman rank correlation between the two ranking was 0.714 which is rather high.

The implication of the present study indicates that there is a close match between "absolute" and "relative" measure of community life satisfaction and this may expand beyond the area of community life satisfaction. In the area of higher education where course evaluation by students is common, for example, a student could rate the various aspects of a course at the beginning of the semester according to his/her "expectation". At the end of the semester, the student rates those same aspects again-- but this time according to his/her "actual" experience with the course. The discrepancy score between the "actual" rating and the "expected" rating could then be used as the course evaluation score. This approach is a "relative" measure of course evaluation. It ought to be tried and the results could be compared with the common practice of a single rating ("absolute" measure) of the course at the end of the semester.

Based on previous studied and the present study, it can be concluded that important predictors of community life satisfaction vary as a function of community size. "Leisure" may be the most important predictor of community life satisfaction in larger towns but it differs for smaller communities. "Environment" may be a significant predictor for larger towns or cities but it is NOT for smaller communities. On the other hand, "community involvement" may be a significant predictor for small communities but NOT for larger towns or cities. However, one predictor (the "economic" dimension), is a significant predictor whether the community is large or small. It can be further concluded that a "relative" measure of community life satisfaction is at least as good as its "absolute" measure counterpart.

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