Satisfaction with care among elderly African American and White residents of adult care facilities

By: Elizabeth J. Mutran, S. Sudha, Tejas Desai, and Kristie Long

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Abstract:

Satisfaction with long-term care has received the attention of academics, policymakers, and the general public. However, little attention has been paid to ethnic differences in satisfaction, despite the increasing proliferation of long-term care options and minority representation in such facilities. The authors find that ethnic differences exist in satisfaction with adult care homes. Dependency, satisfaction with health, resident involvement in placement decisions, home type, and percentage of private rooms vary in their impact on satisfaction by ethnicity. Predictors of satisfaction within groups are primarily intra/interpersonal versus organizational characteristics. African Americans are more affected than Whites by organizational factors. Different predictors of satisfaction by ethnicity may indicate that elders bring different life experiences, cultural beliefs, and expectations with regard to long-term care that may influence their degree of satisfaction. Service delivery in long-term care institutions should be aware of the unique experiences of their residents and implement services to ensure optimal satisfaction and care.

Keywords: long-term care | ethnicity | elder care | nursing home | family home care

Article:

Satisfaction with the quality of care received by older adults in long-term care institutions is increasingly highlighted in research and practice. This has been accompanied by increased regulations often calling for innovative interventions to address the variations in the quality of care provided by different levels and types of organizational structures (Bravo et al. 1999). While a number of studies have addressed the desired features of facilities and staffs that contribute to quality of care (Berlowitz et al. 1995; Bravo et al. 1999; Brocklehurst and Dickinson 1996; Davis, Sebastian, and Tschetter 1997; Grant, Reimer, and Bannatyne 1996; Meister and Boyle 1996; Nystrom and Segesten 1994; Pearson et al. 1993), studies of quality of care across ethnic groups have received less attention. This concern is especially relevant given the faster growth rate of minority elders in comparison to White elders (Siegel 1996).

In this article, we concentrate on the quality of care in homes generically termed *rest homes* or adult care homes. The purpose of the study is twofold. First, we explore ethnic differences in

sources of satisfaction with care by investigating the way ethnicity interacts with characteristics of the homes. We pay specific attention to the analytical issues involved when the measurement of variables is assessed at different levels (Campbell 1999). Second, we stratify the sample by ethnicity to examine the way ethnicity interacts with predictors of satisfaction. The importance of this inquiry is that it addresses two major gaps in the literature: (1) satisfaction of elderly residents with key components of good quality care in adult care homes or their equivalent and (2) ethnic differences in satisfaction with this care.

Background

Since the 1980s, service provision of long-term care facilities for seniors has expanded from traditional skilled care offered by nursing homes to homes that serve frail but less medically needy elders. There are several reasons for these expanded services. First, concerns with the rising costs of institutional care encourage the development of low-cost alternatives that provide personal care services such as meals, supervision of activities of daily living (ADL), and so forth. As noted by Eckert and Lyon (1992), these homes often serve a "marginal" population who are poor and without a support network. Second, the preference of frail elders to live in noninstitutional settings prompts the development of facilities that are more like a home, such as rest homes and assisted-living communities, which presumably are more informal and less medical than traditional nursing home settings. Finally, some operators have turned their family home in which they cared for a frail older person into a business serving persons with similar needs. Although residential care options are diverse, ranging from small family care homes to larger assisted-living facilities, most homes offer housing, meals, and help with ADL to elders who are less impaired than most nursing home residents. These homes typically offer such services at lower rates than nursing homes, although this is not always the case. Housing as many as 1.5 million elderly and disabled residents, they are the fastest-growing alternative to nursing homes in the United States (Hawes et al. 1993).

The question addressed here is whether these homes are able to provide quality service, as judged by their clientele. The focus is on satisfaction with care received. Patient satisfaction with care is crucial to quality assessment, and satisfaction is seen as an important health outcome (Donabedian 1966, 1988). From a provider's point of view, satisfaction indicates the quality of care offered and therefore increases the facility's attractiveness and marketability (Berwick and Knapp 1987; Cleary and McNeil 1988).

Although satisfaction with care is recognized as an important outcome variable, no widely accepted measure has emerged, but rather measures adapted to the setting are often used. Depending on the researcher's purposes, the study might focus on a specific setting that limits generalizability (Bartlett et al. 1984; Carmel 1985; Nystrom and Segesten 1994; Pearson et al. 1993; Sishta, Rinco, and Sullivan 1986), or in some cases they might emphasize representative settings (Hulka et al. 1975; Patrick, Scrivens, and Charlton 1983;Weiss 1988). However, most studies of satisfaction recognize both the technical and interpersonal activities that together constitute health care (Donabedian 1988). The technical domain refers to the application of science and technology of health care, such as the presence of appropriate and up-to-date equipment and suitably trained staff. The interpersonal refers to the social-psychological aspects of health care, including provider-patient relationship, and addresses issues of confidentiality,

concern, empathy, and effective communication (Kane et al. 1994). This human element has been found to be the prime determinant of a patient's perception of quality (Gubrium and Sankar 1990; Kane et al. 1994).

While a substantial body of work has examined quality of life among elders in nursing homes (Berlowitz et al. 1995; Nystrom and Segesten 1994; Pearson et al. 1993), less work has focused on rest homes and fewer still consider ethnic differences in satisfaction. Much of the work on quality of care in nursing homes focuses on the organizational structure of care. For example, for-profit homes appear to have higher staff/patient ratios and lower expenditures for patient care than nonprofit institutions (Elwell 1984; Greene and Monahan 1981). Larger nursing homes have more resources and thus offer higher quality services (Winn and McCaffree 1976). Nonprofit residential facilities, on the other hand, are more likely to have better quality of physical space, resident autonomy, and availability of services (Lemke and Moos 1989). Quality of care appears negatively related to the proportion of lower income patients in a nursing home as indicated by percentage of Medicaid patients in the facility (Fottler, Smith, and James 1981). Other organizational factors such as rate of turnover and level of benefits and wages for personnel, the degree of personalization of residents' room, and residents' perception of the charge nurse's fairness and competence are all related to residents' satisfaction with nursing homes (Kruzich, Clinton, and Kelber 1992).

In contrast, some studies argue that patients' satisfaction with care is more a matter of interpersonal than technical aspects of care (Cleary and McNeil 1988; DiMatteo and Hays 1980). For example, residents' contact with family and friends and access to social activities influence patient morale, life satisfaction, and satisfaction with treatment (Harel 1981). Similarly, Namazi et al. (1989) found that personal factors including the level of social support appear more strongly correlated with satisfaction and psychological well-being in board-and-care homes than environmental factors. Through qualitative interviews, Grau, Chandler, and Saunders (1995) found that the quality of interpersonal relationships with the staff formed the basis for the majority of what residents described as their best and worst experiences. These studies, however, often rely only on bivariate correlations in reporting their results and fail to control for other potential influences on satisfaction with care.

Findings in studies of nursing home care cannot necessarily be generalized to the diversity of adult care environments. Nursing home residents may suffer from greater cognitive impairment than those in other adult care facilities, making it difficult to obtain information that relates to satisfaction with care. They may lack the necessary knowledge to evaluate the technical aspects of their care, be intimidated by fear of staff reprisal, or simply be habituated to lower expectations (Locker and Dunt 1978). Some nursing home residents are frailer, requiring a higher level of care. Their residency is often short due to the seriousness of their condition or prolonged in cases of dementia. On the contrary, residents of adult care homes are healthier and likely to be more independent, requiring less intensive medical care.

ETHNICITY AND SATISFACTION WITH CARE

Ethnicity often interacts with a variety of factors in affecting health, wealth, and well-being (Ferraro 1993; Kessler and Neighbors 1986; Mutchler and Burr 1991).With respect to long-term

care, many studies have shown that, for poorly understood reasons, minorities are underrepresented in institutions that might provide them more appropriate care (Kart 1991;Kulys 1990). Despite greater disability, elderly African Americans are placed in nursing homes between half and three-quarters the rate of elderly Whites (Belgrave, Wykle, and Choi 1993; Greene and Ondrich 1990; Hing 1989; Smith 1993). Some scholars conclude that nursing homes discriminate on the basis of race in admitting patients (Falcone, Bolda, and Leak 1991; Falcone and Broyles 1994).

In light of these patterns, questions with regard to ethnic differences in satisfaction with various types of long-term care facilities naturally arise, but research on this topic is scanty. Mutran (1985) has asserted that ethnicity acts as an important moderating variable between explanatory factors and outcomes (such as satisfaction with care).We thus investigate ethnic differences in sources of satisfaction with care by examining potential interactions between ethnicity and organizational characteristics and individual (resident) characteristics that might influence satisfaction with care. We hypothesize that ethnicity interacts with factors that influence satisfaction with the adult care homes given that African Americans and Whites have historically received differential treatment by the health care system. African Americans and Whites may have different culturally derived preferences with regard to care in later life and may have different life histories that will ultimately influence general life satisfaction in old age.

Method

SAMPLE DESIGN AND DATA

Data are from the 1994 Domiciliary Care Project in North Carolina; residents in 147 domiciliary care facilities in 20 North Carolina counties are used in this analysis. To maximize potential comparisons, counties in North Carolina with a population size of at least 50,000, a minority presence of at least 10%, and at least 5 family care homes and 2 adult care homes were selected. Twenty-nine of the 100 counties in the state met these criteria. These counties were grouped into four strata based on population size and proportion minority: urban high minority, urban low minority, rural high minority, and rural low minority. An urban county was defined as one with a population greater than 100,000. A high minority county was one in which the percentage of African Americans 65 and older, relative to all those 65 and older, was above the median point of 19%. A random sample of 4 counties from each urban and 6 from each rural stratum was then drawn, yielding a total of 20 counties.

Adult care homes were selected from each of the 20 counties including 57 homes for the aged and 135 family care homes. A total of 40 homes for the aged and 106 family care homes agreed to participate in the study, reflecting an overall acceptance rate of 76% (70% of homes for the aged and 79% of family care homes). In the family care homes, all residents aged 65 and older were eligible to participate in the study, and all who consented were enrolled. In each of the larger homes for the aged, a list of all residents aged 65 and older was generated. A random sample of up to 10 Whites was taken, while African American residents were oversampled in the following manner: If a home had less than 15 African American residents, all were interviewed. If there were more than 15 African American residents, 15 of them were randomly selected. If there were no Whites in the home, up to 25 African American residents were selected.

Of the selected respondents, 93% of the home for the aged residents and 96% of the family care home residents agreed to be in the study, reflecting an overall participation rate of 95.6%. Two hundred and four residents were excluded because of communication problems (deafness or nonresponse for other reasons). The Short Portable Mental Status Questionnaire was administered to the remainder to determine their mental status (Pfeiffer 1975); 218 respondents were excluded from the sample for answering fewer than 4 out of 10 questions correctly. Of the 386 respondents who met the criterion for mental competence, 357 seniors, including 143 African American and 214 White elders, completed the questionnaire.

For each resident in the study, medical data were requested from the supervisor in charge or administrator. Furthermore, 130 supervisors and 131 administrators were interviewed for information on organizational characteristics of the homes.

MEASURES

We began with a set of nine items that assessed satisfaction with care, including items that assessed both organizational features and interpersonal variables. The factor structure of these items was first analyzed using exploratory factor analytic techniques. The factor analysis indicated that there were three domains of satisfaction with adult care homes. The first outcome measure was how "at home" the resident felt in the institution. This scale is a composite of three questions: "How often s/he feels at home," "How often s/he feels like s/he has family at the institution," and "How often s/he receives food that s/he likes" ($\alpha = .72$). Response categories for all questions were as follows: (4) *all of the time*, (3) *most of the time*, (2) *some of the time*, (1) *never happens/not true*. The scale "at home" ranged from 3 to 12 with a mean of 8.5. A higher composite score equals greater satisfaction.

Second was a "satisfaction with staff" index, with the same response format as the "at home" measure. Interviewers asked residents to rate how often they agree with the following five statements: "Most people living here get the best possible care," "I am getting all the care I need," "The staff gives me enough attention," "The staff spends as much time as necessary with me," and "The staff here goes out of their way to be nice" ($\alpha = .88$). This scale ranged from 5 to 20, with a mean of 16.7.

The third factor that emerged was a single variable that globally assessed satisfaction: "In general, are you satisfied with the home?" Again, the responses were coded as previously described. Sixty percent were satisfied all of the time, and approximately 20% were dissatisfied some of the time or never satisfied. In keeping with previous research on satisfaction with nursing home care, we test the influence of organizational factors on satisfaction with adult care homes (Kruzich et al. 1992; Weihl 1981) as well as the impact of residents' characteristics in explaining satisfaction (Namazi et al. 1989).

Intrapersonal characteristics were gathered from the residents. These included demographic characteristics such as age, gender, and education. We also included whether the individual was within six months of taking up residency in the home, resident's satisfaction with his or her health, and a measure of the level of physical dependency of the resident. We chose to use

satisfaction with health rather than the usual self-perception of health because we wanted to disentangle one's affect toward their overall physical state from that of satisfaction with the care received. Dependency is a composite score of ADL including the resident's need for assistance with bed mobility, walking, dressing, eating, using the toilet, bathing, and personal hygiene (α = .95). For each ADL, the supervisor in charge or administrator rated the elder's functional status on a 5-point scale ranging from *completely independent* (0) to *total dependence* (5). The dependency score was computed by summing the scores of all ADLs and dividing the total score by 40 (the total possible score of ADL dependence). The responses ranged from 0.20 to 1.00 with a mean of .27 (*SD* = .123).

To measure interpersonal relationships, we asked about frequency of family contact. Specifically, we asked residents how often they saw their children, spouse (if married), or other family members. Residents who saw children, spouse, or other family members at least once a week were coded as having frequent family contact. Also, we included a dichotomous measure indicating whether the resident participated in the decision to be placed in the adult care home.

Organizational characteristics were gathered from interviews with residential care administrators or supervisors in charge of care. We measured the percentage of private rooms in the institution, rate of payment for double occupancy, type of home (family care homes coded 1 or home for the aged coded 0), and percentage of staff who have worked in the home for six months or less as a measure of turnover. We used the percentage of private rooms as an organizational measure indicating the social and economic climate of the home. Preliminary analysis examined urban/rural differences, assessed in a number of ways, but no differences emerged, and this variable was omitted from later analyses.

MODEL AND DATA ANALYSIS

Satisfaction with the home was conceptualized as the outcome of residents' individual characteristics, interpersonal ties, and the characteristics of the homes in which they reside. Three satisfaction models were first analyzed using the combined ethnic data (we call these the *full* models as opposed to the *stratified* models, which use data for only a particular ethnic group). The first model included the explanatory factors predicting the residents' perception of feeling at home at the adult care facility. The second model was analyzed with the same independent variables and residents' satisfaction with the staff as the outcome variable. Last, resident's satisfaction (in general) with the home was used as the outcome variable. The perception of feeling at home and satisfaction with the staff were included as explanatory factors along with the residents' intra/interpersonal characteristics and features of the home in this final equation. All three full models included multiplicative interaction terms of ethnicity with all other independent variables in the model. The results are presented with only those interactive terms that were found to be significant.

The existence of several significant interactions with ethnicity motivated the need to perform the three analyses separately for each of the two ethnic groups. A significant interaction of a variable with ethnicity in the corresponding full model indicated a significant difference between the two regression coefficients of the variable in the models for the two ethnic groups.

To account for the design effect on the variances due to the sampling strategy, all the analyses were done using the SUDAAN software (Shah, Barnwell, and Bieler 1996). The data used for this article are multilevel or hierarchical data, which incur the problems inherent in cluster-correlated data (Hansen, Hurwitz, and Madow 1953). Hierarchical data arise whenever measurements are made on certain elements and the groups to which these elements belong. Since the data in this article include variables on both residents and on the homes they live in, they are an example of hierarchical data. The mixed-model or random-effects regression theory is applicable to the analysis of such data. We use SUDAAN as opposed to software for mixed models and have analyzed the data weighting by both county and home.

The following arguments demonstrate that the SUDAAN software provides appropriate corrections for the standard errors in the presence of correlated data. Consider the following simple linear regression model:

$$Y_{ij} = b_o + b_1 X_{ij} + \varepsilon_{ij} \tag{1}$$

where Y_{ij} is the jth measurement in the ith cluster, $1 \leq j \leq n_i$, $1 \leq i \leq k$; and ε_{ij} is an error term with mean zero. The above model can then be expressed as the so-called marginal (or population-averaged) model:

$$E(Y_{ij}) = b_o + b_1 X_{ij} \tag{2}$$

Alternatively, the error term in model (1) may be decomposed as follows to express model (1) as a linear random-effects model:

$$Y_{ij} = b_o + b_{io} + b_1 X_{ij} + b_{i1} X_{ij} + \delta_{ij} \tag{3}$$

where b_{io} and b_{i1} represent zero-mean deviations in the intercept and the slope, respectively, due to the ith cluster, and δ_{ij} is the residual zero-mean error term. Taking the expectation on both sides of equation (3) above, it thus follows that

$$E(Y_{ij}) = b_o + b_1 X_{ij} \tag{4}$$

which is the same as equation (2). It can thus be said that for linear regression, the random effects model has a marginal representation. Software for analyzing mixed models of type (3) above typically assume that the pair (b_{io}, b_{i1}) follows a bivariate normal distribution with mean (0,0), Var(b_{io}) = λ^2, Var(b_{i1}) = $\gamma 2$, and Cov(b_{io}, b_{i1}) = τ; and that δ_{ij} follows a normal distribution with mean 0 and Var(δ_{ij}) = σ^2. Under these assumptions, it follows (Diggle, Liang, and Zeger 1994) that

$$\text{Cov}(X_{ij}, X_{ik}) = \text{A/sqrt(BC)},$$

where A= $\lambda^2 + \gamma^2 X_{ij} X_{ik} + (X_{ij} + X_{ik})\tau$, B = $\lambda^2 + \gamma^2 X_{ij} + \sigma^2$, and C=$\lambda^2 + \gamma^2 X_{ik} + \sigma^2$. It is particularly noteworthy that this covariance formula is valid only when the normality assumptions about the random deviations are at least approximately satisfied in each cluster (a

difficult case to make when cluster sizes are not large enough). The approach taken in SUDAAN (Williams 2000), however, is more robust in the sense that

$$\mathrm{Cov}(X_{ij}, X_{ik}) = \sigma_{ijk},$$

This covariance assumption allows for heteroscedasticity both within and between clusters. Moreover, the covariance structure is completely unstructured and hence more general. Williams (2000) shows how using such general covariance assumptions, unbiased estimators for variances of linear statistics may be obtained and points out that consistent estimators for variances of nonlinear statistics are possible. Diggle et al. (1994) point out that random-effects regression models are most useful when inferences about individual clusters are the objective. Since the objective in this article is to make inferences about the average over the population of clusters (i.e., homes), a marginal approach such as the one taken by SUDAAN is more appropriate.

Results

DESCRIPTION OF THE SAMPLE

Table 1 provides descriptive information about the variables used in the analysis by ethnicity. African Americans are significantly less satisfied with their care and the homes they live in than are Whites. This is true on all three measures of satisfaction with care. With regard to the organizational characteristics of the home, African Americans and Whites both tended to live in homes where the majority of residents were of their own ethnicity. Whites, moreover, lived in homes with a significantly higher pay rate and a lower staff turnover. Other significant ethnic differences can be seen in the interpersonal characteristics of residents: African Americans are less likely to have taken part in the decision to enter the home and have less frequent family contact. Interpersonal characteristics showed significant sociodemographic differences: There was a higher percentage of men among the African American residents, who also tended to have fewer years of schooling. Other interpersonal dimensions that were related to life in the adult care home, such as level of dependency, satisfaction with health status, or recency of residence, did not differ significantly.

RESULTS FROM THE WEIGHTED REGRESSION ANALYSIS

Tests of statistical interaction revealed that there were extensive differences in the size and direction of the coefficients for a number of the predictors of satisfaction with care on the basis of ethnicity. Because of the amount of interaction, we present the results for each ethnic group separately and include the test statistic (b), standard errors (SE), and significant differences in the test statistic by ethnicity indicated by "†". The variables, which had a significantly different effect on the satisfaction of African Americans in comparison to Whites, are indicated by the symbol "†". Results of the regression analyses analyzed by SUDAAN software are presented in Tables 2, 3, and 4.

Feeling at home. Table 2 includes the estimates for a model in which the scale indicating residents' perception of feeling at home, or the interpersonal component of care, is the dependent variable. African American residents feel more at home in the facility when they are satisfied

with their health in general, have greater dependency, and have lived in the home for more than six months. Their satisfaction is also increased when they are included in the decision-making process to enter a home and when they live in family care homes, the smaller of the two types of adult care homes. Living comfortably in a home took some adjustment, and, with time, adjustment increased and individuals became more satisfied with their setting.

Table 1. Means and Standard Errors of Mean of Variables by Ethnicity

	African American Mean (*SE*)		**White Mean (*SE*)**
Satisfaction measures			
Feelings of being "at home"	7.31 (0.28)	*	8.67 (0.27)
Feeling of satisfaction with staff	14.50 (0.43)	*	17.74 (0.24)
General feeling of being at home	2.84 (0.15)	*	3.55 (0.07)
Organizational characteristics			
Type of home (1 = family care home)	0.41 (0.49)	*	0.50 (0.50)
Rate of payment for residence	1026.30 (14.31)	*	1069.651(7.78)
Percentage private rooms	0.25 (0.02)		0.26 (0.01)
Percentage of staff employed within the past six months	0.23 (0.03)	*	0.13 (0.01)
Percentage of residents who are African American	0.67 (0.03)	*	0.13 (0.02)
Interpersonal characteristics			
Resident took part in the decision to enter home	0.14 (0.03)	*	0.26 (0.05)
Frequent family contact	0.44 (0.05)	*	0.59 (0.05)
Intrapersonal characteristics			
Female	0.57 (0.05)	*	0.76 (0.04)
Age	78.26 (0.74)		78.91 (0.58)
Education	8.15 (0.39)	*	9.37 (0.33)
Level of dependency	0.27 (0.01)		0.27 (0.01)
Satisfaction with health	2.08 (0.11)		2.04 (0.11)
Resident entered the home within the past six months	0.27 (0.05)		0.22 (0.04)
N	150		236

*Significantly different at the .05 level or better.

Table 2. Influences on Residents' Feelings of Being "at Home" in the Adult Care Home

	African American b (*SE*)	**White b (*SE*)**
Intrapersonal characteristics		
Female	0.08 (0.51)	1.89 (0.72)*
Age	0.02 (0.03)	–0.07 (0.03)*
Education	0.04 (0.06)	–0.09 (0.07)
Level of dependency†	3.05 (1.47)*	–3.51 (1.92)
Satisfaction with health†	1.29 (0.19)***	0.45 (0.26)
Resident entered home within the past six months†	–1.24 (0.54)*	0.39 (0.45)
Interpersonal characteristics		
Resident took part in decision to enter home†	1.96 (0.59)**	0.22 (0.49)
Frequent family contact	0.48 (0.49)	1.58 (0.48)**
Organizational characteristics		
Type of home (1 = family care home)	1.89 (0.65)*	0.35 (0.36)
Rate of payment for residence	0.00 (0.00)	0.00 (0.00)
Percentage of private rooms	1.02 (1.32)	1.09 (0.61)
Percentage of staff employed within past six months	–1.48 (1.01)	0.42 (0.93)
Percentage of residents who are African American	0.89 (0.82)	–1.52 (1.17)
Intercept	1.49 (3.40)	12.32 (3.23)
R^2	.41	.31

NOTE: †$p < .05$ for interaction term of ethnicity and predictor variable using the full model.
*$p < .05$. **$p < .01$. ***$p < .001$.

Table 3. Influences on Residents' Satisfaction With Staff

	African American b (*SE*)	White b (*SE*)
Intrapersonal characteristics		
Female	0.42 (0.59)	1.98 (0.70)*
Age	–0.00 (0.03)	–0.00 (0.03)
Education	0.10 (0.07)	–0.11 (0.08)
Level of dependency†	6.35 (1.98)**	–0.86 (1.61)
Satisfaction with health†	1.56 (0.27)***	0.71 (0.24)**
Resident entered home within the past six months	0.95 (0.60)	0.89 (0.55)
Interpersonal characteristics		
Resident took part in decision to enter home†	2.09 (0.75)*	–0.12 (0.47)
Frequent family contact	0.99 (0.55)	0.78 (0.42)
Organizational characteristics		
Type of home (1 = family care home)†	4.49 (0.68)***	–0.37 (0.34)
Rate of payment for residence	0.00 (0.00)	–0.00 (0.00)
Percentage of private rooms†	–2.72 (1.18)*	0.61 (0.69)
Percentage of staff employed within past six months	–2.37 (1.63)	–0.99 (0.84)
Percentage of residents who are African American	–0.17 (1.05)	–2.21 (1.24)
Intercept	6.77 (4.64)	19.73 (3.13)
R^2	.48	.26

NOTE: †$p < .05$ for interaction term of ethnicity and predictor variable using the full model.
*$p < .05$. **$p < .01$. ***$p < .001$.

Table 4.

	African American b (*SE*)	White b (*SE*)
Intrapersonal characteristics		
Female	–0.02 (0.17)	0.16 (0.12)
Age	0.00 (0.01)	0.00 (0.01)
Education	–0.03 (0.01)*	–0.02 (0.01)
Level of dependency†	–0.44 (0.51)	0.82 (0.25)**
Satisfaction with health	0.17 (0.09)	–0.04 (0.05)
Resident entered home within the past six months	0.08 (0.22)	0.01 (0.10)
Feels "at home"	0.15 (0.04)**	0.03 (0.02)
Satisfaction with staff	0.13 (0.02)***	0.19 (0.03)***
Interpersonal characteristics		
Resident took part in decision to enter home†	–0.28 (0.15)	0.21 (0.09)*
Frequent family contact	0.06 (0.17)	–0.28 (0.13)
Organizational characteristics		
Type of home (1 = family care home)	–0.04 (0.23)	–0.10 (0.09)
Rate of payment for residence	–0.00 (0.00)	0.00 (0.00)*
Percentage of private rooms	–0.60 (0.42)	0.14 (0.16)
Percentage of staff employed within past six months	–0.73 (0.33)*	–0.17 (0.22)
Percentage of residents who are African American	–0.05 (0.34)	–0.02 (0.29)
Intercept	0.66 (0.76)	–0.93 (0.97)
R^2	.67	.56

NOTE: †$p < .05$ for interaction term of ethnicity and predictor variable using the full model.
*$p < .05$. **$p < .01$. ***$p < .001$.

Among White residents, women, those younger in age, and those who have frequent contact with their family members are more likely to feel at home. Dependency did not reach significance; however, the tendency was for greater independence to be associated with satisfaction in living in adult care homes. Also, we found that the level of dependency, satisfaction with health, the recency the resident entered the home, and whether the resident was involved in making the

decision to enter the home differentially affected feelings of being at home for African Americans and Whites. Essentially, there was no variable in our analysis that had a similar significant effect on satisfaction with the interpersonal component of care across the two ethnic groups.

Satisfaction with staff. Table 3 includes estimates for a model in which the scale measure of satisfaction with staff, or the organizational and technical aspect of care, is the dependent variable. In Table 3, we find that for African Americans, the predictors for satisfaction with staff are similar to those reported in Table 2. African American residents are more satisfied with staff when they are more dependent, are satisfied with their health, participated in the decision to enter the home, and reside in a family care home. Satisfaction with staff is also higher when there are fewer private rooms. All but the latter variable is associated with the previous measure of satisfaction. Similar to the model shown in Table 2, predictors of satisfaction with staff differ for Whites versus African American residents. Only two items are significant in predicting satisfaction with staff among Whites. As before, among Whites, women are more satisfied then men, but also elders who are satisfied with their health have higher levels of satisfaction with staff.

Although the coefficients that are significantly different across groups are exclusively intra- and interpersonal in nature in Table 2, this is not true in Table 3.We find that ethnic differences in predictors of satisfaction with staff are influenced not only by the intra- and interpersonal characteristics but also by organizational factors of the home for African Americans, such as type of home and percent of private rooms.

Satisfaction with the home. Last, we conducted the same analysis on the residents' general satisfaction with the home, adding two additional predictors: the measure of interpersonal satisfaction and the measure of satisfaction emphasizing organizational factors. Table 4 presents estimates for a model in which the single-item rating of satisfaction with the home is the dependent variable. In this final model, we assess the relative importance to global satisfaction of each of the components of care, the interpersonal and the technical/organizational aspects. We find that residents with less education, who feel at home, who are satisfied with the staff, and homes where the personnel are more stable (percentage of new staff within the past six months) influence overall satisfaction with the home among African Americans. White residents, however, are more satisfied with the home when they are more dependent, are satisfied with the staff, took part in the decision to enter the home, and reside in more costly homes. African American and White residents are significantly different in their general satisfaction with the home by level of dependency and whether they were involved in the decision to relocate to the home.

Discussion

African American elders have traditionally underused nursing home care compared with their White counterparts (Smith 1993); however, this is rapidly changing according to the latest information on rates of nursing home utilization. Researchers have argued that the underrepresentation of ethnic minorities in traditional nursing facilities might have been the result of a preference for informal care by African Americans (Wallace 1990; White-Means and

Thornton 1990). While care in the adult care homes is not informal, the two types of facilities included in our study differ in degree of formality. The family care homes are both smaller and, as the name implies, more like a family home. We see in our data that indeed there is evidence that African Americans are more satisfied in the smaller homes. Whether we are looking at satisfaction with a home because it gives one a feeling of being at home or satisfaction with the staff, African American residents of the smaller family care homes are more satisfied than those living in the larger homes for the aged.

Other researchers have argued a second reason for fewer African Americans in institutionalized care. That is, the facilities were located in White neighborhoods limiting access to African American elders and family members (Smith 1993). While we cannot determine whether the homes in our study were in White neighborhoods, there was no evidence that family contact was significant for predicting satisfaction among African Americans. Family contact was not significant in determining whether African Americans felt at home in a facility or whether they were satisfied with the staff; however, satisfaction of White residents was affected by family contact. For White residents, family contact increased satisfaction in feeling at home in the adult care facilities and marginally increased satisfaction with the staff. We believe that part of the explanation for this difference is in the patterns of caregiving in the two ethnic groups and with the probability of residing in an adult care facility. It is more likely for African Americans than for Whites that, if close kin exist, they are more likely to be cared for at home. Those in facilities are less likely to have family members. This is more true for African Americans than Whites.

Other researchers have argued that facilities discriminate in admitting residents based on race (Falcone and Broyles 1994). We know from other analysis of these data that the majority of residents are in homes that primarily house persons of one race or ethnic group; however, the percentage African American was not significant in predicting satisfaction in any of the equations. This may well be due to lack of variation on the measure when conducting stratified analyses. The smaller homes in our study—the family care homes—may specialize in serving one ethnic group as seen in many other parts of the nation (Mor, Sherwood, and Gutkin 1986). The larger homes, due to economic pressure to operate at full capacity, are more integrated. The nondiscrimination policies that are conditions of Medicare and Medicaid certification have been strong forces operating to integrate nursing homes, yet this has not been true in the adult care homes. Residents in these homes often pay for their room and board privately or through a combination of savings, personal income, or Social Security Disability Income.

For the models that examine ethnic differences in satisfaction, it appears that African Americans are more affected by organizational factors than Whites. We base this on the fact that the type of home—family care home versus adult care home—was significant in two of the three equations for African Americans while never significant for Whites. For African Americans, the percentage of private rooms reduced satisfaction with the staff. This may indicate that the general climate of the home is to ensure that these rooms are better served and others may have to wait for help. In terms of overall satisfaction with the home, African Americans are negatively affected by the turnover rate in the facility. This is not true for Whites. Only in this last equation do we see Whites affected by an organizational variable and a variable that does not affect African Americans. That is, the more costly the home, as measured by pay rate, the more satisfied are the White residents with the home in general.

Three other points can be made with regard to the results. First, satisfaction with care is influenced more by demographic factors among Whites than it is among African Americans. Among Whites, women are more satisfied with care than men. This may be partially due to the fact that women form a larger group of clients and administrators may plan or tailor their services to meet the needs of this larger group. Among Whites, the young-old are more satisfied than are the older residents. We would urge researchers to investigate whether the personal type of care provided by adult care homes meets the needs of those who are potentially more frail due to age with its accompanying frailty and multiple chronic diseases.

Another important finding is the distinct way that ethnicity and dependency relate to satisfaction with care. The interaction between ethnicity and level of dependency is significant across all three outcomes. The stratified analysis suggests that African Americans' and Whites' level of dependency relates to the three outcome measures in opposite directions. African Americans who are dependent are both more at home in the facility and more satisfied with the staff. In the third equation, however, the slope is not significantly different from zero and has a negative sign. Whereas for White residents, degree of dependency is unrelated to measures of feeling at home or satisfaction with the staff, yet the coefficient becomes positive and influences the overall feeling of satisfaction with the home. The more dependent the elderly White person, the higher his or her overall satisfaction with care. For Whites, dependency directly influences this overall evaluation. For African Americans, dependency operates indirectly, influencing their overall evaluation through the more specific measures of feeling at home in the facility and satisfaction with staff.

Turning attention to the issue of who made the decision to use adult care homes, we find that for Whites, their overall satisfaction with the home is influenced by the degree in which they participated in the decision. For African Americans, this measure operates, as did dependency. For African Americans, involvement in the decision to go to an adult care home has a direct relationship with specifics of care; that is, they are able to feel more at home and they are more satisfied with the staff if they have participated in the decision. Both being satisfied with feeling at home and satisfaction with the staff influence the overall evaluation of African Americans, while for Whites only, the satisfaction with staff influences their overall evaluation. This, too, is an important distinction between the two groups. For African Americans, with less of a history of using formal care, the more intimate, personal, and less formal nature of the facility weighs heavily in determining satisfaction.

This inquiry highlights ethnic differences in assessing satisfaction with care in long-term care facilities and provides insight for researchers and policymakers concerned with ensuring quality of care for elders in these settings. Although many of the significant differences between African Americans and Whites were among intra- and interpersonal characteristics of the residents, we must recognize that organizational characteristics, particularly the type of home, may influence satisfaction among different ethnic groups. Additionally, by virtue of the fact that many of these homes serve clientele predominantly of one or the other ethnic group, we may not be able to capture all of the organizational predictors of satisfaction by ethnicity.

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