The Gerontologist
cite as: *Gerontologist*, 2021, Vol. 61, No. 6, 858–869
doi:10.1093/geront/gnab035
Advance Access publication March 8, 2021

Research Article

Examining Racial and Ethnic Disparities Among Older Adults in Long-Term Care Facilities

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Received: May 14, 2020; Editorial Decision Date: February 28, 2021

Decision Editor: Barbara J. Bowers, PhD, RN, FAAN, FGSA

Abstract

Background and Objectives: The purpose of this project was to examine individual-level ethnic and racial differences and facility-level differences in types of complaints and rates of complaint resolution in a local long-term care ombudsman program.

Research Design and Methods: We employed a mixed-methods sequential explanatory design. First, we analyzed secondary complaint data based on residents' race and ethnicity (n = 464) and facility characteristics (n = 101). We then conducted 2 focus groups with ombudsmen (n = 12) to provide context for our quantitative findings and to explore the ombudsmen's views on disparities in long-term care facilities.

Results: Racial and ethnic minority residents were more likely to generate complaints related to residents' rights than nonminority residents. Assisted living facilities were more likely to have complaints related to residents' rights and outside agencies than nursing homes. The rate of complaint resolution increased among facilities with a higher proportion of minority residents, compared to facilities with a lower proportion of minority residents. However, an estimation of cross-level interaction revealed that non-Hispanic White residents in these facilities experienced faster complaint resolution than minority residents. Ombudsmen expressed concerns about communication barriers between minority residents and facility staff and discussed different complaint types and resolution rates according to facility types.

Discussion and Implications: Our findings highlight disparities across long-term care facilities as well as disparities in care minority residents experience. Long-term care ombudsman program complaint data should be disaggregated by race and ethnicity of the residents to advocate for policy change at facility, state, and federal levels.

Keywords: Health care policy, Institutional care, Minority older adults, Ombudsman, Quality of care

In 2016, racial and ethnic minorities accounted for 23% of the U.S. older adult population (U.S. Census Bureau, 2017). By 2060, it is estimated that 45% of U.S. older adults will be from racial and ethnic minority groups (U.S. Census Bureau, 2017). As the minority older adult population increases, so too does their utilization of long-term care facilities (LTCFs; Harris-Kojetin et al., 2019). In 2016, nearly 25% of nursing home residents and 18.5% of residential care community residents (e.g., assisted living facilities) were racial and ethnic minorities (Harris-Kojetin et al., 2019). In particular, the number of Hispanic and Asian older adults living in nursing homes between 1999 and 2008 grew by 55% (Feng et al., 2011).

Because a growing number of racial and ethnic minority older adults are utilizing long-term care services, many researchers have investigated care disparities experienced by this group. Nearly a half-million minority older adults in LTCFs reported worse health outcomes, poorer quality of care and quality of life, and lower levels of social interactions, compared to non-Hispanic White residents (Bliss et al., 2015; Cai et al., 2011; Campbell et al., 2016; Li & Cai, 2014). However, there is a lack of attention to both individual- and facility-level factors that affect residents' receipt of care. Specifically, there is scant evidence on facility-level factors that affect how residents receive and respond to the care. The purpose of our study was to examine the associations of the race and ethnicity of the residents and facility-level characteristics (i.e., types, size, financial resources, dementia care capacity, and diversity of the facility) with types of complaints and rates of complaint resolution. Additionally, we conducted focus groups to explore ombudsmen's perceptions of our quantitative findings and their views on disparities in LTCFs.

Disparities Experienced by Racial and Ethnic Minority Residents in Long-Term Care

Investigators have researched racial and ethnic inequality in LTCFs by examining several facility factors (i.e., between-facility factors). Facility factors, such as low levels of direct care and nurse staffing, limited clinical and financial resources, and fewer community resources, contribute to racial and ethnic disparities in quality of care in LTCFs (Bowers et al., 2000; Fennell et al., 2010; Mor et al., 2004). Mor et al. (2004) explained that facilities with poor facility factors are categorized as *lower tier*, with minority older adults more likely to reside in these facilities. Due to these factors, minority residents are experiencing higher rehospitalization rates, receive poorer quality of care during their stay, and have more difficulties with discharging back to their communities than non-Hispanic White residents (Rivera-Hernandez, Rahman, Mukamel et al., 2019).

Studies also showed that minority older adults experience dissimilar levels of care within the same facility. For example, researchers reported that minority residents tended to have lower flu vaccination rates (Cai et al., 2011), higher readmission rates (Rivera-Hernandez, Rahman, Mor et al., 2019), and feel less socially engaged in their facilities (Li & Cai, 2014) compared to non-Hispanic White residents in the same facility. However, previous studies mainly utilized nursing home data to examine disparities in long-term care and investigated limited aspects of health-related deficiencies. Conversely, long-term care ombudsmen program (LTCOP) complaint data provide evidence about various types of health and health care deficiencies of residents in both nursing homes and assisted living facilities. In particular, LTCOP complaint data reveal a violation of residents' rights or dignity, varying levels of services that residents receive, and residents' concerns about facility administration and outside health care agencies.

Using LTCOP complaint data from six U.S. states, Huber et al. (2001) recorded that minority residents tended to report complaints regarding "loss of dignity and respect" and were less likely to have their complaints fully resolved compared to non-Hispanic White residents. Several researchers further analyzed complaint data, but they did not include racial or ethnic variables. Instead, they predominantly examined either the prevalence of limited types of complaints (e.g., abuse, neglect, and exploitation) or limited facility factors (e.g., type and size) associated with the number of complaints (Magruder et al., 2018, 2019; Troyer & Sause, 2013). It was necessary to update our understanding of racial and ethnic disparities in LTCFs using comprehensive information provided in LTCOP complaint data.

Integrated Model of Health Care Disparities

The integrated model of health care disparities (Smedley et al., 2003) explains racial and ethnic disparities in long-term care by incorporating social, economic, and cultural determinants that affect individuals' beliefs and health care needs. According to the model, these determinants could influence long-term care residents' expectations, preferences, and interpretation on care that they receive, as well as their own health care needs. In addition to these individual-level factors, this model highlights systemic (e.g., administration and financing) and care process-level (e.g., clinician bias and patient mistrust) factors to alleviate disparities in health care (Smedley et al., 2003). In short, it is critical to understand how health care is presented and delivered to the residents based on the characteristics and the operation of LTCFs.

The model assumes differences in help-seeking behaviors of the patients and clinicians' understanding and action to meet their patients' needs. In the context of LTCFs, residents' help-seeking behaviors are shown through reporting complaints on various issues that they experience. Moreover, how well complaints are resolved represents the potential to improve the overall process of care and the provider–resident interaction. In relation to different levels of risk factors for racial and ethnic disparities in health care suggested by the model, types of complaints and rates of complaint resolution, particularly among racial and ethnic minority residents, should be considered to improve the quality of care in LTCFs.

Many LTCOPs report aggregate demographic information of residents per facility but do not associate the race or ethnicity of the residents with individual complaints. As a result, it has been difficult to identify and address disparities that minority residents may experience. By using data that specify the race and ethnicity of the residents associated with each complaint and facility characteristics, we addressed the following four

research questions: (a) Is racial and ethnic minority status of the resident associated with the type of complaints? (b) Which facility-level attributes are associated with the type of complaints? (c) Is racial and ethnic minority status of the resident associated with the resolution of complaints? and (d) Which facility-level attributes are associated with the resolution of complaints? Additionally, we conducted focus groups seeking ombudsmen's feedback to elaborate our findings.

Design and Methods

We partnered with a local nonprofit organization subcontracted to house the LTCOP for Dallas County, TX. This organization oversees more than 9,000 nursing home and assisted living residents. We employed a mixed-method approach with a sequential explanatory design. In this design, we conducted quantitative and qualitative studies in two consecutive phases and used both data to connect and cross-validate the findings (Creswell & Plano Clark, 2017; Ivankova et al., 2006). In the first phase, we analyzed secondary data regarding the race and ethnicity of the residents, facility characteristics, and complaint data from a local LTCOP. In the second phase, we conducted two focus groups with ombudsmen to reflect on our quantitative results. We selected this approach to corroborate our statistical results and explore ombudsmen's views on disparities in LTCFs. This study was approved by the University of Texas at Arlington Institutional Review Board (#2019-0153).

Study Procedures

Phase 1

As the LTCOP typically reports aggregate demographic information of the residents per facility, the partner organization collected complaint data while specifying the race and ethnicity of the resident for each complaint during the 3-month period of May–July 2019. They then provided the research team with deidentified data on complaints, the race and ethnicity of the resident associated with each complaint, and facility characteristics. The complaints were made by the residents themselves or on behalf of the residents. The data set provided 464 complaints to analyze. The total number of residents in our data was 310, with 99 (31.9%) minority residents and 211 (68.1%) non-Hispanic White residents.

Phase 2

We visited an in-person training for ombudsmen in the partner organization and invited all of the volunteer and staff ombudsmen to participate in a focus group. We included volunteer ombudsmen because many of them served as ombudsman for a significant amount of time (up to 10.5 years) with comparable knowledge and experience in LTCFs as staff. We followed up with those who expressed their interest via e-mail. Of the 29 ombudsmen at the partner organization (20 volunteers and nine staff members), 12 ombudsmen (six volunteers and six staff members) voluntarily participated in the focus group. Two focus groups were arranged in conference rooms at the partner organization. Each group was randomly assigned six ombudsmen and consisted of both volunteers and staff. The participants provided consent prior to the focus group. The principal investigators of this study (K. Lee and R. L. Mauldin) each facilitated a focus group that lasted about 60 min. We presented findings from Phase 1 and asked for insights. Two additional questions were also asked in order to explore their experience of working with minority residents and their views on disparities in LTCFs. The discussions were audio-recorded and transcribed verbatim by a professional company.

Measures

Type of complaints

The data set included over 100 complaint codes. These codes were based on categories from the Administration on Aging Ombudsman Complaint Codes guidelines (Texas Health and Human Services, 2015). Our team grouped these complaints into one of the five main categories: (a) residents' rights (e.g., abuse, autonomy), (b) resident care (e.g., care, rehabilitation), (c) quality of life (e.g., activities, dietary), (d) administration (e.g., policies, staffing), and (e) problems with outside agency (e.g., state Medicaid agency and managed care, or other systems, such as Medicare, Supplemental Security Income (SSI), Department of Veterans' Affairs health programs, homecare, and hospitals).

Resolution of complaints

Resolution of complaints was recorded by ombudsmen based on the resident's self-reported satisfaction about resolution status. Additionally, they were operationalized by whether a complaint was resolved to the resident's satisfaction by July 2019, the end of the data collection period for this study (0 = *partially resolved [i.e., ombudsmen were still working on the complaint] or not resolved to the resident's satisfaction*; 1 = *resolved to the resident's satisfaction*).

Racial and ethnic minority

Racial and ethnic minority status of the residents was a binary variable (0 = *non-Hispanic White*; 1 = *racial or ethnic minority*).

Facility characteristics

Facility characteristics included facility types (1 = *Assisted living facility*, 0 = *Nursing home*), Medicaid certification status (1 = *Yes*, 0 = *No*), dementia care capacity (1 = *Yes*, 0 = *No*), total licensed bed capacity (the number of beds),

and the proportion of racial and ethnic minority residents (the number of minority residents/the total number of residents in a facility) reported from the beginning of the partner agency's fiscal year.

Data Analysis

Phase 1

To answer our first two research questions, we identified individual-level racial and ethnic differences and facility-level characteristics associated with types of complaints using a multilevel multinomial logistic regression. For our third and fourth research questions, we analyzed individual-level racial and ethnic differences and facility-level factors underlying complaint resolution. Using a Poisson varying exposure model, complaints that were still active at the end of the data collection period were treated as right-censored. In the model investigating complaint resolution rates, the estimates were reported in the log scale so that they yielded a change in the rate of complaint resolution. We extended this approach to assess whether a complaint took more or less than 2 weeks to be resolved, using a piecewise constant hazard model. We selected 2 weeks as a suitable cutoff because 44% of the complaints took more than 2 weeks to be resolved. Because Shippee et al. (2020) reported differential rates in quality of life scores based on residents' race and the facility's proportion of minority residents, we also examined cross-level interaction effects between individual racial and ethnic minority status and the proportion of minority residents at the facility level. However, there was a substantial loss of fit in the model with types of complaints. As a result, we only included cross-level interactions in the models with complaint resolution rates. All the analyses were conducted using Stata/SE version 15.1. Nine cases were missing on the number of beds in a facility and two cases were missing on the race and ethnicity of residents involved in the complaint. The final count of complaints for analyses was 453.

Phase 2

We used the Rigorous and Accelerated Data Reduction technique for our qualitative data. We selected this technique because it was optimal for managing small projects (e.g., less than 10 focus groups; Watkins, 2017). Using Excel and Microsoft Word, we took the following five steps illustrated by Watkins (2017): (a) formatting each data transcript in the same manner, (b) creating an all-inclusive data table, (c) coding the transcript data, (d) selecting themes, and (e) selecting relevant quotes. Two investigators (K. Lee and J. Harwerth) led the qualitative data analysis. In the sequential explanatory design, it was possible to use triangulation as a strategy to achieve rigor in our qualitative study (Morse, 2015). We cross-checked our initial themes and quotes with our quantitative results to provide reliable and accurate information.

Results

Sample Description

Our data included a total of 464 complaints related to 310 residents across 101 LTCFs. As given in Table 1, the most frequent complaint was resident care (n = 182, 39.2%), followed by quality of life (n = 146, 31.5%), residents' rights (n = 89, 19.2%), administration (n = 34, 7.3%), and problems with outside agency (n = 13, 2.8%). The majority of the complaints (n = 366, 78.9%) were resolved to the residents' satisfaction. A large number of complaints (n = 319, 68.8%) were reported by or on behalf of non-Hispanic White residents. Regarding facility types, 49.5% of the facilities (n = 50) were assisted living facilities and 54.5% were Medicaid-certified facilities (n = 55). Approximately 20% of residents were residing in Medicaid-certified assisted living facilities, and about one third of the facilities (36.1%) had dementia care. The average number of beds per facility was 110.7 (SD = 67.0). On average, 27.3% of the total residents were racial and ethnic minorities.

Table 2 presents complaint types, resolution rates, and facility characteristics by residents' racial and ethnic groups. Nearly half of non-Hispanic Whites (41.2%) and Hispanics (47.1%) complained about resident care. Additionally, 17.5% of non-Hispanic Whites and 21.8% of Black/African Americans had complaints related to residents' rights. While 31.3% of non-Hispanic Whites had quality-of-life-related complaints, 38.5% of African Americans and 41.2% of Hispanics had similar complaints as well. Small proportions of non-Hispanic Whites, Black/African Americans, and Hispanics had complaints regarding administration (6.6%, 2.6%, and 5.9%, respectively) and problems with outside agencies (3.3%, 1.3%, and 0.0%, respectively). The majority of the complaints were indicated to be resolved satisfactorily regardless of the residents' race and ethnicity. While 41.7% of non-Hispanic Whites were living in assisted living facilities, 20.5% of Black/African Americans and 29.4% of Hispanics were residing in assisted living facilities. Finally, more than half of non-Hispanic Whites (57.4%) and Black/African Americans (61.5%) were residing in facilities with dementia care.

Out of the 12 ombudsmen who participated in the focus groups, seven participants (58.3%) were non-Hispanic White, two (16.7%) were Black/African American, two (16.7%) were Hispanic, and one (8.3%) was Asian. The average duration of working as an ombudsman was approximately 5 years.

Complaint Type Analysis

Table 3 summarizes the statistical results from the analysis identifying individual-level racial and ethnic differences and facility-level characteristics that are associated with types of complaints. Racial and ethnic minority residents were more likely to generate complaints regarding

Table 1. Description of Sample Characteristics for Complaints (*N* = 464) and facilities (*N* = 101)

Variable	Frequency	%	Mean	*SD*
Complaint type				
Resident care[a]	182	39.2		
Residents' rights[b]	89	19.2		
Quality of life[c]	146	31.5		
Administration[d]	34	7.3		
Problems with outside agency[e]	13	2.8		
Resolution of complaint				
Not resolved satisfactorily	55	11.9		
Resolved satisfactorily	366	78.9		
Still active (right-censored)	43	9.3		
Race/ethnicity of residents involved in complaints				
Non-Hispanic White	319	68.8		
Minority	143	30.8		
Missing	2	0.4		
Facility characteristics				
Assisted living facility	50	49.5		
Medicaid facility	55	54.5		
Dementia care			36.1%	14.9%
Number of beds			110.7	67.0
Minority %			27.3%	37.2%

[a]Resident care complaints include care, rehabilitation, and restraints.
[b]Residents' rights complaints include abuse, access to information by resident or resident's representative, autonomy, and financial.
[c]Quality of life complaints include activities, dietary, and environment/safety.
[d]Administration complaints include policies and staffing.
[e]Problems with outside agency complaints include problems with outside agency, system, or people (e.g., certification/licensing agency, state Medicaid agency and managed care, other systems, such as Medicare, Supplemental Security Income (SSI), VA, or homecare, and hospital).

Table 2. Complaint Type, Resolution, and Facility Characteristics by Minority Status of the Residents (*N* = 310)

	Non-Hispanic White (*n* = 211)		Black/African American (*n* = 78)		Hispanic (*n* = 17)		Other groups (*n* = 4)	
Variable	*n*	%	*n*	%	*n*	%	*n*	%
Complaint type								
Resident care[a]	87	41.2	28	35.9	8	47.1	0	0.0
Residents' rights[b]	37	17.5	17	21.8	1	5.9	2	50.0
Quality of life[c]	66	31.3	30	38.5	7	41.2	1	25.0
Administration[d]	14	6.6	2	2.6	1	5.9	1	25.0
Problems with outside agency[e]	7	3.3	1	1.3	0	0.0	0	0.0
Resolution of complaint								
Not resolved satisfactorily	19	10.0	8	11.0	0	0.0	1	33.3
Resolved satisfactorily	171	90.0	65	89.0	14	100.0	2	66.7
Facility characteristics								
Assisted living facility	88	41.7	16	20.5	5	29.4	0	0.0
Medicaid facility	138	65.4	66	84.6	12	70.6	4	100.0
Dementia care	121	57.4	48	61.5	8	47.1	3	75.0

[a]Resident care complaints include care, rehabilitation, and restraints.
[b]Residents' rights complaints include abuse, access to information by resident or resident's representative, autonomy, and financial.
[c]Quality of life complaints include activities, dietary, and environment/safety.
[d]Administration complaints include policies and staffing.
[e]Problems with outside agency complaints include problems with outside agency, system, or people (e.g., certification/licensing agency, state Medicaid agency and managed care, other systems, such as Medicare, Supplemental Security Income (SSI), VA, or homecare, and hospital). Other groups include native Americans, Alaska natives, and Pacific Islanders.

Table 3. Multilevel Multinomial Logistic Regression Predicting the Likelihood of Reporting a Complaint Based on Type of Complaint ($N = 453$)

	Type of complaint (ref = Resident care[a])			
	Residents' rights[b]	Quality of life[c]	Administration[d]	Problems with outside agency[e]
Variable	*b* (*SE*)	*b* (*SE*)	*b* (*SE*)	*b* (*SE*)
Race/ethnicity of residents involved in complaints				
Minority	0.87 (0.40)*	0.62 (0.35)	0.69 (0.58)	0.41 (1.10)
Facility characteristics				
Assisted living facility	1.68 (0.49)**	0.86 (0.58)	−0.13 (0.86)	2.70 (0.96)**
Medicaid facility	0.48 (0.51)	0.44 (0.58)	−0.58 (0.83)	2.60 (1.12)*
Dementia care	0.37 (0.28)	0.51 (0.31)	−0.15 (0.41)	0.57 (0.65)
Number of beds	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	−0.02 (0.01)*
Minority %	−0.62 (0.61)	−0.74 (0.58)	−1.08 (0.90)	−1.91 (1.78)
Intercept	−1.88 (0.63)**	−0.74 (0.72)	−0.78 (1.02)	−3.07 (1.23)**
Intercept variance	0.00 (0.00)	0.36 (0.25)		
Covariance	0.00 (0.00)			

Note: *b* = coefficients/logit; *SE* = standard error.

[a]Resident care complaints include care, rehabilitation, and restraints.

[b]Residents' rights complaints include abuse, access to information by resident or resident's representative, autonomy, and financial.

[c]Quality of life complaints include activities, dietary, and environment/safety.

[d]Administration complaints include policies and staffing.

[e]Problems with outside agency complaints include problems with outside agency, system, or people (e.g., certification/licensing agency, state Medicaid agency and managed care, other systems, such as Medicare, Supplemental Security Income (SSI), VA, or homecare, and hospital).

*$p < .05$, **$p < .01$.

residents' rights and less likely to generate resident care complaints compared to non-Hispanic Whites ($b = 0.87$, $p < .05$). Compared to nursing homes, complaints concerning residents' rights were more likely to be made in assisted living facilities ($b = 1.68$, $p < .01$). Statistically significant effects on complaints concerning external agency were also found in assisted living facilities ($b = 2.70$, $p < .01$), Medicaid-certified facilities ($b = 2.60$, $p < .05$), and the facilities with lower licensed bed capacity ($b = -0.02$, $p < .01$). Furthermore, no effects were found pertaining to the facility's proportion of minority residents, nor for dementia care, regardless of complaint types.

Complaint Resolution Analysis

As demonstrated in Table 4, the rates of resolution for complaints concerning residents' rights ($b = -0.42$, $p < .05$), quality of life ($b = -0.35$, $p < .05$), and administration ($b = -0.82$, $p < .01$) were found to be significantly lower in comparison to complaints concerning resident care. Resolution rates also dropped with increasing bed capacity ($b = -0.01$, $p < .05$). However, complaint resolution rates were higher in facilities with dementia care ($b = 0.68$, $p < .05$) and facilities with a higher concentration of minorities ($b = 2.18$, $p < .01$).

A significant cross-level interaction effect was found with respect to minority status of the residents and the facility's proportion of minority residents. Overall, resolution rates were higher in facilities with a higher concentration of minorities. However, the combined effect of the facility's proportion of minority residents ($b = 2.18$, $p < .01$), minority status of the residents ($b = 0.51$, $p = .264$), and the interaction between these two variables ($b = -1.71$, $p = .074$) explained that the increase in resolution rates only applied to complaints initiated by non-Hispanic White residents. Here, we used the reported regression beta coefficients to estimate the difference in resolution rates at 1 *SD* above and below the mean facility minority percentage, first fixing minority status of the residents at zero (non-Hispanic White) and then fixing it at 1 (minority). Significant improvement in resolution rates was only achieved when minority status was fixed at zero (95% confidence interval [CI]: 0.02–0.31).

The results in Table 5 revealed whether rate differentials changed over time by including interaction effects with a time period variable. We found that the resolution rate was lower for complaints concerning residents' rights ($b = -0.52$, $p < .05$), quality of life ($b = -0.45$, $p < .05$), and administration ($b = -1.60$, $p < .001$) in the first 2-week period, compared to resident care complaints. However, after 2 weeks, there was little difference in the rate of complaint resolution across the different types of complaints. An exception was observed with complaints concerning administration in which the resolution rate rose after 2 weeks ($b = 1.52$, $p < .01$). We also found higher complaint

Table 4. Multilevel Poisson Regression Predicting Resolution of Complaints ($N = 453$)

Variable	Complaint disposition *b* (*SE*)
Complaint type (ref = resident care[a])	
Residents' rights[b]	−0.42 (0.17)*
Quality of life[c]	−0.35 (0.14)*
Administration[d]	−0.82 (0.27)**
Problems with outside agency[e]	0.08 (0.45)
Race/ethnicity of residents involved in complaint	
Minority	0.51 (0.46)
Facility characteristics	
Assisted living facility	−0.18 (0.66)
Medicaid facility	0.55 (0.65)
Dementia care	0.68 (0.32)*
Number of beds	−0.01 (0.00)*
Minority %	2.18 (0.66)**
Minority × Minority %	−1.71 (0.96)
Constant	−2.60 (0.79)**
Intercept variance	1.62 (0.37)

Note: *b* = coefficients in terms of a log link function; *SE* = standard error.
[a]Resident care complaints include care, rehabilitation, and restraints.
[b]Residents' rights complaints include abuse, access to information by resident or resident's representative, autonomy, and financial.
[c]Quality of life complaints include activities, dietary, and environment/safety.
[d]Administration complaints include policies and staffing.
[e]Problems with outside agency complaints include problems with outside agency, system, or people (e.g., certification/licensing agency, state Medicaid agency and managed care, other systems, such as Medicare, Supplemental Security Income (SSI), VA, or homecare, and hospital).
*$p < .05$, **$p < .01$.

resolution rates in facilities with lower licensed bed capacity ($b = -0.01$, $p < .05$), facilities with dementia care ($b = 0.92$, $p < .01$), and facilities with a higher proportion of minorities ($b = 2.12$, $p < .01$) within the first 2 weeks.

We included the interaction effect between minority status of the residents and the facility's proportion of minority residents in the prior analysis. Resolution rates for non-Hispanic White residents were higher than minority residents in high-minority facilities in the first 2-week time period (95% CI: 0.01–0.26) but were not so thereafter (95% CI: −0.03 to 0.22). Conversely, while resolution rates were not better for minorities in high-minority facilities in the first 2-week period (95% CI: −0.09 to 0.10), resolution rates improved for minorities after 2 weeks (95% CI: 0.00–0.10).

Focus Group Results

We analyzed data to provide context for our quantitative findings. Four themes emerged from our discussions: (a) cultural traits and communication barriers, (b) impacts of complaint complexity on resolution rates, (c) needs to strengthen assisted living regulations, and (d) broader issues in Medicaid-certified facilities.

Table 5. Piecewise Constant Regression Model Estimating How Quickly a Complaint Is Resolved (2 weeks as a reference point; $N = 650$)

Variable	*b* (*SE*)
Main effects	
Time	−0.43 (0.61)
Complaint type (ref = Resident care[a])	
Residents' rights[b]	−0.52 (0.20)*
Quality of life[c]	−0.45 (0.18)*
Administration[d]	−1.60 (0.44)***
Problems with outside agency[e]	0.12 (0.48)
Race/ethnicity of residents involved in complaint	
Minority	0.79 (0.48)
Facility characteristics	
Assisted living facility	−0.28 (0.67)
Medicaid facility	0.52 (0.67)
Number of beds	−0.01 (0.00)*
Dementia care	0.92 (0.34)**
Minority %	2.12 (0.70)**
Minority × Minority %	−2.04 (1.02)*
Interaction effects	
Time × Residents' right	0.22 (0.35)
Time × Quality of life	0.25 (0.28)
Time × Administration	1.52 (0.54)**
Time × Problems with outside agencies	−0.29 (0.91)
Time × Minority	−1.37 (0.74)
Time × Minority %	−0.25 (0.79)
Time × Minority × Minority %	2.03 (1.42)
Time × Assisted living facility	0.59 (0.46)
Time × Medicaid facility	0.23 (0.47)
Time × Dementia care	−0.84 (0.27)**
Time × Number of beds	0.00 (0.00)
Constant	−2.55 (0.81)**
Intercept variance	1.62 (0.40)

Note: *b* = coefficients in terms of a log link function; *SE* = standard error.
[a]Resident care complaints include care, rehabilitation, and restraints.
[b]Residents' rights complaints include abuse, access to information by resident or resident's representative, autonomy, and financial.
[c]Quality of life complaints include activities, dietary, and environment/safety.
[d]Administration complaints include policies and staffing.
[e]Problems with outside agency complaints include problems with outside agency, system, or people (e.g., certification/licensing agency, state Medicaid agency and managed care, other systems, such as Medicare, Supplemental Security Income (SSI), VA, or homecare, and hospital).
*$p < .05$, **$p < .01$, ***$p < .001$.

Cultural traits and communication barriers

Our first main finding from Phase 1 indicated that minority residents were less likely to generate resident care complaints and more likely to generate residents' rights or outside agency complaints. When asked why minority residents were less likely to generate resident care complaints, many ombudsmen in the focus groups affirmed

this finding while discussing observed tendencies across racial and ethnic groups.

> The population I serve is probably 80% minority. I would say this [finding] does not surprise me. They pick and choose their battles and they are not going to complain about care when they know this might be temporary.

> I have noticed with our Asian-American families, probably about 10 percent. They don't tend to complain about these matters. They're usually out there talking with their families, and their families are taking care of their folks.

According to the majority of the ombudsmen in the focus groups, many minority residents express difficulties with voicing their complaints, either from fears of retaliation or being branded as a difficult resident by facility administration. Due to these fears, many minority residents are hesitant to provide their ombudsmen consent to pursue their complaint, which results in minority residents not generating care-related complaints.

> My minority residents … they'll tell me their concerns. I usually won't get consent and they'll usually tell me it's because they don't want to be labeled as a complainer. Or they don't want to be retaliated against … They seem to be more fearful of that.

> I get pretty much equal complaints but then I only get consent to work the complaint from predominantly more Caucasians … for whatever reasons. When I ask, "Do I have your consent to work on this?" I get [from minority residents] "No. It's just the way things are."

As to why minority residents are more likely to generate residents' rights complaints, some ombudsmen explained that minority residents are more willing to give consent for these complaints when they are in a situation where they are in desperate need of help.

> They are at the point where they need help. If you are being abused, then you need the ombudsman … If you're going to be transferred or discharged, then you need the ombudsman … because they're at a point where they are essentially desperate, and they need our help now.

> We're totally consent driven. Any complaint that we get from any residents, we cannot do anything about it unless they allow us to take action. They may tell us a long story of some horrible treatment or something that's happened to them. If they say, "I'm not really comfortable with you talking to the director or to anybody else," our hands are tied. But that might go on and on and on until finally it's so bad that they say, "Okay, go ahead. You can have consent now."

Additionally, our ombudsmen highlighted language barriers between staff and residents whose first language was not English. Particularly, the ombudsmen identified a lack of readily available bilingual LTCF staff and ombudsmen. Without bilingual resources, our ombudsmen were worried that residents whose first language was not English might not be able to articulate their concerns or complaints.

> I have some who only speak Spanish and I am concerned for them because some of them cannot speak [English]. They're very vulnerable. They're very frail … I don't speak Spanish and it's frustrating because I feel like there are probably issues and they're not getting the kind of care that they deserve to have. It is very concerning to me, our Spanish speaking residents, or any residents who don't speak any English or very little English.

> I find that minorities struggle with translation. The lack of appropriate staff to be present during medical discussions or showing their need to express their needs is lacking.

Impacts of complaint complexity on resolution rates

Our second major finding indicated that resident care complaints were more likely to be resolved within 2 weeks when compared to other complaints, such as residents' rights, quality of life, or administration. Our ombudsmen explained that resident care complaints are easier to resolve but are more likely to reoccur. On the other hand, residents' rights, quality of life, and administration complaints often require systemic changes which take longer to resolve as they require more involved solutions, such as staff training.

> With care issues, for example, they need to shower that same day, they need assistance with diapers or change of clothes…. These are very quick to be resolved in the moment and then a week later, it's the same thing.

> On dietary [complaint related to quality of life], it's difficult to satisfy just one person's complaint…. It took me close to six weeks to get it changed so that she can get an apple every day, because with 80 or 90 residents, it's just difficult.

Needs to strengthen assisted living regulations

Our third major findings were related to the facility type differences in complaints made and the speed of complaint resolution. Residents in assisted living facilities were more likely to generate complaints regarding residents' rights and outside agencies as opposed to resident care complaints. One of the ombudsmen said that because residents in

assisted living facilities have higher cognitive functioning than those in nursing homes, they may have the ability to understand and generate more complicated issues.

> I think it's because, from my assisted living you've got more cognitive, higher functioning residents who can be far more explicit in their complaint and I find residents in my assisted living facilities hand me some of my more complicated cases.

Our ombudsmen also explained that complaints from nursing homes tend to be easier to resolve, compared to assisted living facilities. Because nursing homes have strong federal regulations, ombudsmen can easily refer to these guidelines when resolving a complaint. Conversely, the lack of strong regulations in assisted living facilities often makes it difficult for ombudsmen to formulate and enforce recommended changes. Additionally, several ombudsmen said they generally rely on their own problem-solving skills, accessible policies and procedures, and their relationships with administrators at assisted living facilities.

> In assisted living the regulations are a lot vaguer. In nursing homes, we have pages upon pages of regulations that we can refer back to. For assisted living, you kind of have to get creative in how you resolve some concerns because you may not have that regulation to back you up.

> It takes long to get that attention that you need from somebody higher up in an assisted living facility. It truly is something that we need to use our professional relationships. They have to get approval through corporate. They're wanting to make changes and they're wanting to do things, but it can take time.

Broader issues in Medicaid-certified facilities

Our last major finding was that Medicaid-certified facilities were more likely to generate outside agency complaints. The majority of ombudsmen confirmed this finding and said that they frequently encountered outside agency complaints among residents in Medicaid-certified facilities. Furthermore, the ombudsmen reported that these issues could be easily resolved.

> My experience in my private pay facilities is that it's very rare for them to issue a discharge notice or try to evict a resident.

> Somebody has been dropped from Medicaid. We can fix that. That's obviously going to be resolved to the satisfaction of the resident. I can't fix that if they don't like how you cook your eggs every morning at my private pay.

Our ombudsmen also shared additional issues that were unique to Medicaid-certified facilities. In particular, inadequate staffing and high turnover rates appeared to be big concerns among these facilities. They reported that Medicaid-certified facilities have high proportions of minority residents, and such issues (i.e., inadequate staffing and high turnover rates) can contribute to disparities that minority residents may experience.

> I would suggest that Medicaid facilities have the absolute minimum staffing. If you are waiting for the bathroom and there's only one aid taking care of 12, 13 people.

> Thinking about the homes that I cover and that I've covered in the past, we have some staff turnover [in assisted living facilities] but not like what we see in our Medicaid facilities.

Discussion and Implications

Rights of Racial and Ethnic Minority Residents

Our findings suggest that racial and ethnic minority residents are less likely to generate resident care complaints but are more likely to make residents' rights complaints. These findings are consistent with previous literature (Huber et al., 2001). According to ombudsmen in our focus groups, minority residents tend to wait until grievances become "desperate" before filing formal complaints to avoid retaliation and being labeled as a "complainer." Our ombudsmen also discussed that these behavioral tendencies may be the result of cultural differences and language barriers. Our ombudsmen emphasized a lack of readily available bilingual facility staff and bilingual ombudsmen for those whose first language was not English.

Additionally, minority residents may have had negative experiences with health care providers resulting in limited trust in their care providers and the expectation that their care will not be as satisfactory as that given to non-Hispanic Whites (Sims, 2010). According to the integrated model of health care disparities, however, individuals' beliefs and expectations can be modified by provider–resident interactions and health care providers' ability to comprehend individuals' varied circumstances (Smedley et al., 2003). Cai et al. (2011) argued that communication and educational styles commonly used in LTCFs overlook diverse knowledge, beliefs, and attitudes regarding care plans or processes resulting in racial and ethnic disparities. There could be opportunities for ombudsmen to provide facility staff with training due to their own training on residents' rights, resident-directed care, experience with various facilities, and existing relationships with facility staff. Particularly, LTCFs in rural areas that lack access to cultural competence training from outside agencies would benefit most from ombudsmen's involvement.

These efforts would help reduce discriminatory behaviors of staff, enhance the relationship between residents and staff, and further create nonracially discriminatory environments.

Facility-Level Attributes in Types of Complaints

Our results showed that assisted living residents were more likely to have complaints related to residents' rights and outside agencies than resident care. Due to physical and mental independence among assisted living residents, these residents may be able to stand up against rights or violations from outside providers. However, ombudsmen in our focus group discussed that these complaints in assisted living facilities were challenging to resolve, regardless of the urgency of these issues, due to the lack of strong regulations. In April 2003, the Assisted Living Workgroup (ALW) that consisted of 50 assisted living providers addressed this issue and made 110 recommendations for state regulations to improve affordability, direct care, medication management, operations, resident rights, and staffing (ALW, 2003). However, recommended changes have not yet been reflected in many states' regulations (Carder & Dys, 2019). A national initiative for assisted living facilities should be resumed to continue the conversation and share strategies to implement changes in the state assisted living regulations.

Our results also showed that Medicaid-certified facilities were more likely to have complaints related to outside agencies. Residents in Medicaid-certified facilities that largely include nursing homes typically work with state Medicaid agency or managed care. Our finding suggests that their experience with state agencies should be improved. For example, ombudsmen could help the residents understand their Medicaid coverage and navigate the managed care system. When working with vulnerable residents in these facilities, ombudsmen should support them in having quality experiences both outside and inside of their facilities.

Facility-Level Attributes in Resolutions of Complaints

In our study, we did not determine significant relationships between minority status of the residents and the rates of complaint resolution. However, complaints in facilities with a greater proportion of minority residents were more likely to be resolved satisfactorily than facilities with a smaller proportion of minority residents. Our cross-level interaction results further explained that this result was due to high-resolution rates of complaints among non-Hispanic Whites residing in facilities with a high concentration of minority residents. In LTCFs, a resident council (a voluntary group of residents) discusses various issues with the facility and makes suggestions to amend them. It is important to ensure the racial and ethnic diversity of the council members. Also, ombudsmen should work with the council members to address racial and ethnic disparities in their care process and support minority residents in the facility. Furthermore, long-term care providers should document their decision-making process and include their residents in a complaint resolution process to achieve greater resident satisfaction for their overall health care experience in LTCFs.

Next, smaller facilities and those with dementia care were more likely to have complaints quickly resolved. This could be a result of these facilities having better staff-to-resident ratios, which equips staff to respond to residents' concerns in a timely manner. Alzheimer's certified facilities also provide staff with specialized training for their physically and mentally vulnerable residents, which may help them resolve residents' concerns more effectively. Small assisted living facilities have been found to have a lower proportion of staffing-related complaints than larger facilities (Magruder et al., 2018). In fact, during the focus group discussions, several ombudsmen said that some residents were hesitant to share their complaints because they understood the struggles their aides were facing (e.g., understaffing, low pay, and long work hours). The majority of states still neglect the importance of staff satisfaction and retention of staff (Carder & Dys, 2019). As federal nursing home regulations require sufficient nursing staff, states should also require having adequate staff-to-resident ratios and managing staff turnover. Staff performance evaluation, human resource policies, or management practices recommended by the ALW should be adopted in all states to support facility staff and to ensure the delivery of care that influences the overall experience of the residents, particularly in large LTCFs.

Finally, we underline our disaggregated racial and ethnic complaint data used for this study. The current National Ombudsman Reporting System does not include racial and ethnic data despite documented racial and ethnic disparities in LTCFs. By collecting the race and ethnicity of the residents associated with each complaint, LTCOPs will be able to continue to detect racial and ethnic disparities in LTCFs. This recommended federal policy change could be made by the U.S. Department of Health and Human Services by revising their regulations for the LTCOP (45 C.F.R. § 1324 et seq., 2016; Mauldin et al., 2020). Indeed, such a change would be in alignment with the race reporting mandates established by the Affordable Care Act of 2010 (42 U.S.C. § 242k, 2011).

Limitations and Directions for Future Research

First, our study's results are limited to the North Texas regions, not including rural areas, which may limit generalizability. Although our study extends the current knowledge of care experiences in LTCFs by examining multiple attributes at the facility level, we did not include other individual-level factors beyond race and ethnicity.

During the focus groups, the ombudsmen explained that they often received quality of life related complaints, particularly a lack of Kosher meals from Jewish residents, and complaints related to residents' rights from those with chronic health conditions (e.g., dementia or obesity). Future studies should include these individual-level attributes to investigate the levels of care that vulnerable older adults may experience. Next, we combined non-Whites as racial and ethnic minorities due to the small proportions of Hispanics (5%) and other racial and ethnic groups (1.3%) in our sample. However, each racial and ethnic group may have different experiences and complaints in LTCFs. Therefore, future studies should examine such differences with a larger and more diverse sample. Our qualitative findings also suggest that the examination of facility-level factors can be improved by including proportions of residents receiving postacute rehabilitation and staff turnover rates. As for qualitative research, we recommend conducting individual interviews with ombudsmen and facility staff to better understand how their own social, economic, and cultural backgrounds influence their experience or perceptions when working with minority residents.

Conclusions

Our study reported racial and ethnic disparities in both types of complaints and rates of complaint resolution. Findings from our study showed that disparities experienced by minority residents were related to various factors at the facility level. Our quantitative and qualitative data suggest the importance of state regulations for assisted living facilities not only to monitor care outcomes across states, but also to improve staff recruitment and retention. We also highlight the role of ombudsmen in supporting both residents and facility staff for nonracially discriminatory environments in LTCFs. LTCOPs should collect complaint data disaggregated by the race and ethnicity of the residents to detect disparities and protect the rights and quality of care of residents from diverse backgrounds.

Funding

This work was supported by the Borchard Foundation, through its Center on Law and Aging, and the Communities Foundation of Texas in 2019.

Conflict of Interest

None declared.

Acknowledgments

We appreciate the partnership from The Senior Source, committed to enhancing the overall quality of life of older adults in greater Dallas, TX.

References

Assisted Living Workgroup. (2003). *Assuring quality in assisted living: Guidelines for federal and state policy, state regulation, and operations*. http://www.theceal.org/images/alw/AssistedLivingWorkgroupReport-April2003.pdf

Bliss, D. Z., Gurvich, O., Savik, K., Eberly, L. E., Harms, S., Mueller, C., Wyman, J. F., Garrard, J., & Virnig, B. (2015). Are there racial-ethnic disparities in time to pressure ulcer development and pressure ulcer treatment in older adults after nursing home admission? *Journal of Aging and Health*, **27**(4), 571–593. doi:10.1177/0898264314553895

Bowers, B. J., Esmond, S., & Jacobson, N. (2000). The relationship between staffing and quality in long-term care facilities: Exploring the views of nurse aides. *Journal of Nursing Care Quality*, **14**(4), 55–64; quiz 73. doi:10.1097/00001786-200007000-00009

Cai, S., Feng, Z., Fennell, M. L., & Mor, V. (2011). Despite small improvement, black nursing home residents remain less likely than whites to receive flu vaccine. *Health Affairs (Project Hope)*, **30**(10), 1939–1946. doi:10.1377/hlthaff.2011.0029

Campbell, L. J., Cai, X., Gao, S., & Li, Y. (2016). Racial/ethnic disparities in nursing home quality of life deficiencies, 2001 to 2011. *Gerontology & Geriatric Medicine*, **2**, 2333721416653561. doi:10.1177/2333721416653561

Carder, P., & Dys, S. (2019). How states changed regulatory requirements for assisted living staff since 2003. *Innovation in Aging*, **3**(Suppl. 1), S441. doi:10.1093/geroni/igz038.1655

Creswell, J. W., Plano Clark, V. L. (2017). *Designing and conducting mixed methods research* (3rd ed.). Sage Publication.

Feng, Z., Fennell, M. L., Tyler, D. A., Clark, M., & Mor, V. (2011). Growth of racial and ethnic minorities in US nursing homes driven by demographics and possible disparities in options. *Health Affairs*, **30**(7), 1358–1365. doi:10.1377/hlthaff.2011.0126

Fennell, M. L., Feng, Z., Clark, M. A., & Mor, V. (2010). Elderly Hispanics more likely to reside in poor-quality nursing homes. *Health Affairs (Project Hope)*, **29**(1), 65–73. doi:10.1377/hlthaff.2009.0003

Harris-Kojetin, L., Sengupta, M., Lendon, J. P., Rome, V., Valverde, R., & Caffrey, C. (2019). Long-term care providers and services users in the United States, 2015–2016: National Center for Health Statistics. *Vital & Health Statistics*, **3**(43): 19–21. https://www.cdc.gov/nchs/data/series/sr_03/sr03_43-508.pdf

Huber, R., Borders, K., Netting, F. E., & Nelson, H. W. (2001). Data from long-term care ombudsman programs in six states: The implications of collecting resident demographics. *The Gerontologist*, **41**(1), 61–68. doi:10.1093/geront/41.1.61

Ivankova, N. V., Creswell, J. W., & Stick, S. L. (2006). Using mixed-methods sequential explanatory design: From theory to practice. *Field Methods*, **18**(1), 3–20. doi:10.1177/1525822X05282260

Li, Y., & Cai, X. (2014). Racial and ethnic disparities in social engagement among US nursing home residents. *Medical Care*, **52**(4), 314–321. doi:10.1097/MLR.0000000000000088

Magruder, K. J., Fields, N. L., & Xu, L. (2018). Sizing up assisted living: An examination of long-term care ombudsman complaint data. *Home Health Care Services Quarterly*, **37**(3), 158–176. doi:10.1080/01621424.2018.1474830

Magruder, K. J., Fields, N. L., & Xu, L. (2019). Abuse, neglect and exploitation in assisted living: An examination of long-term care ombudsman complaint data. *Journal of Elder Abuse & Neglect*, **31**(3), 209–224. doi:10.1080/08946566.2019.1590275

Mauldin, R. L., Lee, K., Tang, W., Herrera, S., & Williams, A. (2020). Supports and gaps in federal policy for addressing racial and ethnic disparities among long-term care facility residents. *Journal of Gerontological Social Work*, **63**(4), 1–17. doi:10.1080/01634372.2020.1758270

Mor, V., Zinn, J., Angelelli, J., Teno, J. M., & Miller, S. C. (2004). Driven to tiers: Socioeconomic and racial disparities in the quality of nursing home care. *The Milbank Quarterly*, **82**(2), 227–256. doi:10.1111/j.0887-378X.2004.00309.x

Morse, J. M. (2015). Critical analysis of strategies for determining rigor in qualitative inquiry. *Qualitative Health Research*, **25**(9), 1212–1222. doi:10.1177/1049732315588501

Rivera-Hernandez, M., Rahman, M., Mor, V., & Trivedi, A. N. (2019). Racial disparities in readmission rates among patients discharged to skilled nursing facilities. *Journal of the American Geriatrics Society*, **67**(8), 1672–1679. doi:10.1111/jgs.15960

Rivera-Hernandez, M., Rahman, M., Mukamel, D. B., Mor, V., & Trivedi, A. N. (2019). Quality of post-acute care in skilled nursing facilities that disproportionately serve black and Hispanic patients. *The Journals of Gerontology, Series A: Biological Sciences and Medical Sciences*, **74**(5), 689–697. doi:10.1093/gerona/gly089

Shippee, T. P., Ng, W., & Bowblis, J. R. (2020). Does living in a higher proportion minority facility improve quality of life for racial/ethnic minority residents in nursing homes? *Innovation in Aging*, **4**(3), igaa014. doi:10.1093/geroni/igaa014

Sims, C. M. (2010). Ethnic notions and healthy paranoias: Understanding of the context of experience and interpretations of healthcare encounters among older Black women. *Ethnicity & Health*, **15**(5), 495–514. doi:10.1080/13557858.2010.491541

Smedley, B. D., Stith, A. Y., & Nelson, A. R. (2003). Assessing potential sources of racial and ethnic disparities in care: Patient- and system-level factors. In B. D. Smedley, A. Y. Stith, & A. R. Nelson (Eds.), *Unequal treatment: Confronting racial and ethnic disparities in health care* (pp. 125–159). National Academies Press.

State long-term care ombudsman programs, 45 C.F.R. § 1324. (2016). https://www.federalregister.gov/documents/2016/12/20/2016–30455/state-long-term-care-ombudsman-programs

Texas Health and Human Services. (2015). *AoA ombudsman complaint codes*. https://hhs.texas.gov/sites/default/files/documents/laws-regulations/forms/8619/aoa-complaint-codes.pdf

Troyer, J. L., & Sause, W. (2013). Association between traditional nursing home quality measures and two sources of nursing home complaints. *Health Services Research*, **48**(4), 1256–1278. doi:10.1111/1475-6773.12021

U.S. Census Bureau. (2017). *Projected race and Hispanic origin: Main projections series for the United States, 2017–2060*. https://census.gov/programs-surveys/popproj/about/faq.html#par_textimage

United States Code, 2006 edition, supplement 4, title 42—The Public Health and Welfare, 42 U.S.C. § 242k. (2011). https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title42-section242k&num=0&edition=prelim

Watkins, D. C. (2017). Rapid and rigorous qualitative data analysis: The "RADaR" technique for applied research. *International Journal of Qualitative Methods*, **16**(1), 1–9. doi:10.1177/1609406917712131