Verbal and Physical Aggression Directed at Nursing Home Staff by Residents

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CONTEXT: Little research has been conducted on aggression directed at staff by nursing home residents.

OBJECTIVE: To estimate the prevalence of resident-to-staff aggression (RSA) over a 2-week period.

DESIGN: Prevalent cohort study.

SETTING: Large urban nursing homes.

PARTICIPANTS: Population-based sample of 1,552 residents (80 % of eligible residents) and 282 certified nursing assistants.

MAIN OUTCOME MEASURES: Measures of resident characteristics and staff reports of physical, verbal, or sexual behaviors directed at staff by residents.

RESULTS: The staff response rate was 89 %. Staff reported that 15.6 % of residents directed aggressive behaviors toward them (2.8 % physical, 7.5 % verbal, 0.5 % sexual, and 4.8 % both verbal and physical). The most commonly reported type was verbal (12.4 %), particularly screaming at the certified nursing assistant (9.0 % of residents). Overall, physical aggression toward staff was reported for 7.6 % of residents, the most common being hitting (3.9 % of residents). Aggressive behaviors occurred most commonly in resident rooms (77.2 %) and in the morning (84.3 %), typically during the provision of morning care. In a logistic regression model, three clinical factors were significantly associated with resident-to-staff aggression: greater disordered behavior (OR=6.48, 95 % CI: 4.55, 9.21), affective disturbance (OR=2.29, 95 % CI: 1.68, 3.13), and need for activities of daily living morning assistance (OR=2.16, 95 % CI: 1.53, 3.05). Hispanic (as contrasted with White) residents were less likely to be identified as aggressors toward staff (OR=0.57, 95 % CI: 0.36, 0.91).

CONCLUSION: Resident-to-staff aggression in nursing homes is common, particularly during morning care. A variety of demographic and clinical factors was associated with resident-to-staff aggression; this could serve as the basis for evidence-based interventions. Because RSA may negatively affect the quality of care, resident and staff safety, and staff job satisfaction and turnover, further research is needed to understand its causes and

consequences and to develop interventions to mitigate its potential impact.

KEY WORDS: nursing home; dementia-related behaviors; elder abuse; staff mistreatment.

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BACKGROUND

Efforts have been initiated over the past 3 decades to assure that vulnerable residents of nursing homes are not subjected to elder abuse by staff.^{1–3} This phenomenon has received significant attention from clinical researchers,^{1,4–12} and many large-scale interventions have been implemented to prevent it. These interventions include mandatory background checks for employees, federal legislation,^{1,13,14} state survey processes focusing heavily on residents' right to be free from elder abuse,¹⁴ and state ombudsman programs that encourage residents, staff, and families to report even the suspicion of abuse.^{1,15–17} Some experts have even suggested and several states have considered legislation to permit families to install video cameras, often called “granny cams,” in resident rooms to monitor care.^{18–21}

Verbally, physically, and sexually aggressive behaviors of nursing home residents directed at staff, however, have received far less public attention. Resident-to-staff aggression (RSA) may be very common, as nursing home staff, particularly certified nurse assistants (CNAs), are frequently in close contact with residents to provide care, and many nursing home residents behave aggressively. The threat posed by a potentially aggressive resident is a significant occupational stressor for health-care providers. In the 2011 American Nurses Association Health and Safety Survey, 34 % of registered nurses ranked on-the-job assault as one of their three greatest safety concerns.^{22,23}

RSA may have deleterious effects on staff, including physical injury, psychological duress, reduced job satisfac-

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tion, burnout, and emotional reactions including anger, sadness, guilt, and helplessness.^{24–28} RSA has important potential consequences for nursing home administrators as well, including financial costs for staff medical and psychological care, additional security, increased absenteeism, staff turnover, and litigation.^{24,25} RSA may also lead to reactive abuse and neglect of long-term care residents. Due to frustration, staff members may respond to an aggressive resident with verbal or physical abuse,^{28–30} potentially triggering a vicious circle of escalating aggression.³⁰ Alternatively, staff may react to RSA by minimizing or avoiding contact with aggressive residents,²⁴ thereby reducing the quality of care these residents receive. Unfortunately, nursing home administrators and staff victims frequently do not report and, when possible, even ignore RSA, which is often considered “part of the job.”^{24,25,31}

In this article, we report on the prevalence of RSA and the characteristics of the events and involved residents in five nursing homes using methodology explicitly created for the study. To our knowledge, this represents the largest systematic study of the phenomenon to date.

METHODS

This project is part of a major National Institute on Aging (NIA) and National Institutes of Justice (NIJ) funded study attempting to estimate the prevalence of resident-to-resident elder mistreatment in long-term care facilities. CNA staff were also interviewed about aggressive resident behaviors directed toward them. Additionally, residents for whom the staff member provided primary care and about whom they were reporting were assessed in terms of cognitive and functional status.

This study was approved by the Institutional Review Boards (IRB) of Weill Cornell Medical College (0803009718) and Hebrew Home at Riverdale (03081/P060). All residents who met the inclusion criteria (not on hospice care) were screened for their capacity to provide informed consent for minimally invasive research. For those who were not capable, key contacts (usually family) were contacted by facility staff.

Setting and Data Collection

This study was performed in five large nursing homes randomly selected from the population of large facilities in two regions of New York City. We interviewed the CNA primary caregivers ($n=282$) to residents about the behavior of 1,552 residents, representing 72 % of the population. After excluding hospice patients, the sample reflected 80 % of residents. The response rate for staff reports was 89 %.

The unit of analysis was the resident because we wished to estimate the percentage of residents exhibiting RSA

behaviors rather than the frequency of individual behaviors. This design was also chosen because when staff members are the unit of analysis (as in previous studies), they may be reporting about multiple residents, and it is more difficult to extrapolate those reports and estimates back to the number of actual residents engaged in staff mistreatment.

Procedures

Research staff interviewers with a bachelors or masters degree in health-related fields conducted individual private interviews with CNAs at scheduled times that did not interfere with workflow. CNAs on the day shift were targeted because they are the designated primary care nurse assistants who provide most of the direct care to residents.

Interview Instruments

Interviews were conducted using a structured questionnaire inquiring whether CNAs had experienced any form of physical, verbal, or sexual aggression by residents under their care within the past 2 weeks. We also inquired about the contextual details of the event including the exact nature of the aggression experienced, the setting, and the time of day.

For this study, we created and validated an instrument (available upon request from the authors) to measure aggressive behaviors of nursing home residents to other residents and staff. We used extensive focus group research for item generation and included physical behaviors (e.g. hitting, kicking), verbal behaviors (e.g., cursing, screaming), and sexual aggression (e.g., saying sexual things, inappropriate touching).³² The Cronbach's alpha (α_C) estimates were 0.695 for verbal and 0.753 for physical aggression.

Resident-level covariate assessment measures included the *Disordered Behavior Index* in the CNA Informant Interview.³³ Typical items include: “wanders during the day,” “argumentative,” and “disrupts other's activities.” Items are rated in terms of frequency of occurrence: “not at all,” “sometimes (1–4 times per week),” and “often (5+ times per week).” The α_C estimate was 0.871 for this sample.

Resident affect was assessed using the *Mood Symptoms Scale*; CNAs most familiar with each resident were asked to report on residents' affect using the Multidimensional Observation Scale for Elderly Subjects (MOSES).³⁴ The scale contains 11 items including “good spirits,” “sad or depressed,” and “crying” and was scored in the symptomatic direction. The α_C for this sample was 0.705.

Resident affect was also assessed using the Feeling Tone Questionnaire (FTQ).³⁵ The measure contains 16 questions asked directly of the resident. Typical items are: “Are you

feeling happy today?” “Do you feel lonely?” “Do you sleep well?” Each item is coded “yes,” “no,” or “equivocal (sometimes, it depends),” and the response rated for affect using a five-point continuum from positive to negative using anchors for ratings. The α_C for this sample was 0.880.

We assessed resident care needs using the *Staff-Reported Assistance Received in Basic Activities of Daily Living (BADL) Scale*. This scale evaluates the extent of staff-reported assistance with personal care (e.g., dressing, grooming). Items include, “putting on shoes,” “putting on undergarments,” and “brushing teeth/cleaning dentures.” CNAs were asked to rate the level of help received that morning: “independent/no assistance needed,” “received some assistance (participated),” and “maximal assistance (did not participate).” The α_C for this sample was 0.968.

Performance ADL Impairment of the resident was assessed directly using the Performance of Activities of Daily Living (PADL).³⁶ The scale contains 27 items that measure an individual’s lack of ability to perform certain activities of daily living independently, such as “putting on a sweater,” “buttoning and unbuttoning a sweater,” “guiding a spoon to the mouth,” and “combing hair”. Performance times are recorded, and items are rated as to whether the task was performed with or without cueing, or could not be performed at all. The α_C estimates are typically in the 0.90s³⁷; the estimate for this sample was 0.940. Residents were also assessed on performance of *range of motion* using several items related to the ability to “raise arms overhead,” “touch toes,” and “walk or wheel with a wheelchair.”

Cognition was assessed using the 14-item *CARE Diagnostic Cognitive Disorder (CAREDIAG) Scale*. Typical items include stating “age,” “year of birth,” “current date,” and questions on whether memory problems make it difficult to remember “things like names of people in your family or close friends” or how to “keep track of personal business, like handling money.” The CAREDIAG has been studied using several advanced psychometric models, including analyses of its relationship to dementia diagnosis^{38,39} and performance across ethnically diverse groups.^{40,41} The α_C for this sample was 0.875.

The Observed Total Behavior Disorder Index was also used to measure observed behaviors. A trained research assistant performed observations of affect and behavior. Each participating resident was observed for 5 min, once each in the morning, afternoon, and evening plus two other times for a total of five observations, using a 39-item measure. Frequency of behaviors is coded using a five-point behaviorally anchored scale from “occurs not at all” to “occurs with great frequency (almost continuously).” Typical items measuring affect include “crying,” “smiling/laughing,” and “staring blankly.” Items measuring behavior include: “disruptive of others,” “argumentative,” and “uncooperative.” This scale is scored in the disordered direction. The α_C for this sample was 0.675.

Statistical Approach

Univariate and bivariate analyses were conducted to evaluate how many residents had engaged in RSA within the previous 2 weeks and to identify correlates of being engaged in such behavior. First, univariate distributions were examined to describe the types of activity as well as when and where they occurred. Then, residents who engaged in RSA behaviors were compared to those who did not using a z test for differences in proportions and a t -test for differences in scale means. Two-sided p -values were reported, with a statistically significant association identified as a p -value ≤ 0.05 . Potential covariates were selected at the beginning of the study to reflect factors that may be related to RSA, based on the literature reviewed or clinical experience. These included level of cognitive and functional impairment, behavior disorder, and level of assistance provided as well as key demographic factors. Items statistically significant in bivariate analysis were entered into a multivariate logistic regression model, with RSA status specified as the dependent variable. Multivariate analysis including staff-reported clinical variables and demographic data was adjusted for clustering of residents within units and within CNA staff. Colinearity diagnostics were performed prior to specification of the final model. Cognitive impairment, as measured by the CARE Diagnostic scale, was significant at the zero-order level, but not in the multivariate analyses, and was correlated with both performance and reported ADL measures >0.50 ; thus, it was removed to avoid colinearity.

Sensitivity analyses were conducted adding resident-level assessment and observational data. Additional sensitivity analyses were conducted using generalized estimating equations (GEE) with a binary distribution and a logit link, adjusted for clustering within units and CNAs. Analytic statistics were conducted using SPSS Version 18 Complex Samples and SAS Version 9.2 (SAS Institute, Inc., Cary, NC).

RESULTS

The majority of residents were female (71.5 %) with a mean age of 84; 64.3 % of residents were white, a lower proportion than found in national nursing home samples and reflecting the ethnic diversity of New York City. Bivariate demographic and clinical correlates of aggressor status are shown in Table 1. Residents participating in RSA tended to be older and currently married. African-American and Hispanic residents were less likely to be aggressors. Clinical characteristics associated with RSA included having higher levels of resident-assessed cognitive and functional impairment, greater observed and staff-reported affective symptoms and behavioral impairment, greater

Table 1. Clinical Characteristics and Demographic Variables Associated With Aggressor Status

	Non-RSA			RSA			<i>p</i> -value
	<i>(n=1,310)</i>			<i>(n=242)</i>			
	N	Mean/%	SD	N	Mean/%	SD	
Resident assessment measures							
Range of motion impairment scale (direct resident assessment of performance)	852	6.54	(7.30)	125	7.36	(7.17)	0.243
Feeling Tone Questionnaire depression scale (direct resident assessment)	917	54.08	(11.76)	159	55.52	(12.71)	0.161
Care Diagnostic cognitive impairment scale (direct resident assessment)	1,035	7.64	(4.69)	190	9.21	(4.51)	<0.001
Performance ADL impairment scale (direct resident assessment of performance)	922	9.99	(13.35)	160	15.24	(14.35)	<0.001
Observation measures							
Observed affect score	1,222	6.72	(2.70)	236	7.94	(3.27)	<0.001
Observed behavior score	1,222	5.26	(2.43)	236	6.19	(3.55)	<0.001
Staff informant measures							
Disturbing behaviors index	1,309	8.28	(6.78)	242	19.33	(9.74)	<0.001
Mood symptoms scale	1,301	−0.40	(4.99)	242	4.64	(5.99)	<0.001
Basic assistance	1,279	11.93	(7.55)	235	15.22	(6.17)	<0.001
Observation schedule PADL—difficulty	1,030	1.44	(2.52)	176	3.42	(3.64)	<0.001
Demographic characteristics							
Age (years)	1,228	83.97	(10.01)	226	85.70	(8.96)	0.016
Education (years)	1,000	11.87	(4.12)	185	12.50	(3.77)	0.052
Female	920	70.5 %		185	76.4 %		0.056
Married	150	11.7 %		40	17.0 %		0.030
Black, non-Hispanic	260	20.6 %		27	12.1 %		0.002
Hispanic	230	18.2 %		29	12.9 %		0.048

All clinical measures are scored in the deviant direction (higher score indicating greater impairment)

impairment in performing basic ADL tasks, and greater staff-reported receipt of morning ADL assistance.

A total of 282 staff members participated in the study, reporting on the RSA behavior of 1,552 nursing home residents under their care (Table 2). Staff reported that 15.6 % of residents (*n*=242) had directed aggressive behaviors toward them within the past 2 weeks (2.8 % only

physical, 7.5 % only verbal, 0.5 % sexual, and 4.8 % a combination of verbal and physical). Staff described 18 different types of abusive behavior. The most common types of verbally abusive behavior reported were screaming (9.0 % of residents) and using bad words toward staff (7.2 %). The most common types of physically abusive behavior reported were hitting (3.9 % of residents) and kicking (2.6 %). Aggressive behaviors were reported as occurring most commonly in the resident's room (77.2 %), but staff described RSA in nearly every location within the nursing home (Table 3). RSA most frequently occurred during the morning (84.3 %), but also at several other times (Table 4).

Table 5 presents the final results of cross-sectional logistic regression analyses. Four factors that were significantly associated with RSA status in the first multivariate model remained significant in the sensitivity analyses that included resident-reported and -observed characteristics. RSA was related to: greater disordered behavior (OR= 6.476, CI: 4.552, 9.214; sensitivity analysis OR=5.900, CI:

Table 2. Types of Aggressive Behaviors Directed Toward Staff (N=1,552 Residents)

Behavior	Number (percentage) of residents exhibiting behavior
Verbally aggressive behaviors	
Screaming	139 (9.0)
Using bad words	112 (7.2)
Bossing around/demanding	46 (3.0)
Insulting race or ethnic group	26 (1.7)
Trying to scare with words	17 (1.1)
Physically aggressive behaviors	
Hitting	61 (3.9)
Kicking	41 (2.6)
Grabbing	37 (2.4)
Scratching	36 (2.3)
Pushing/shoving	26 (1.7)
Biting	19 (1.2)
Spitting	11 (0.7)
Threatening gestures	10 (0.6)
Throwing things	8 (0.5)
Taking/touching things	2 (0.1)
Getting help when didn't ask for or want help	1 (0.1)
Sexually aggressive behaviors	
Saying sexual things	4 (0.3)
Touching in a sexual manner	3 (0.2)
Total (any report of physical, verbal, sexual, or other behaviors)	242 (15.6)

Table 3. Location of Resident to Staff Aggressive Behavior (N=232)

Location	Number (percentage) of residents behaving aggressively at this location
Patient room	179 (77.2)
Combination/no pattern	20 (8.6)
Dining area	17 (7.3)
Activity/common area	7 (3.0)
Hallway	5 (2.2)
Nursing station	3 (1.3)
Off the unit	1 (0.4)

Table 4. Timing of Resident Aggressive Behaviors Toward Nursing Home Staff (N=217)

Timing	Number (percentage) of residents behaving aggressively at this time
Morning	183 (84.3)
Combination/no pattern	20 (9.2)
Afternoon	11 (5.1)
Noon meal	3 (1.4)

4.121, 8.449; $p < 0.001$), higher levels of mood disturbance (OR=2.291, CI: 1.678, 3.127; sensitivity analysis OR=2.420, CI: 1.772, 3.303; $p < 0.001$), and receipt of greater ADL morning assistance (OR=2.161, CI: 1.530, 3.054; sensitivity analysis OR=2.160, CI: 1.521, 3.068; $p < 0.001$). Additionally, Hispanic (as contrasted with White) residents were less likely to be reported as engaging in RSA (OR=0.571, 95 % CI: 0.357, 0.912; sensitivity analysis OR=0.571, CI: 0.353, 0.926; $p = 0.023$). African American (as contrasted with White) resident status also conferred a protective effect but did not achieve statistical significance at the 0.05 level (OR=0.635, CI: 0.384, 1.051, $p = 0.077$; OR=0.626, CI: 0.379, 1.036, $p = 0.068$, sensitivity analyses). Age, sex, education, and cognitive status were not significantly associated with RSA in the final sensitivity model. In the final model the added observed behavior disorder variable was also significantly related to aggressor status (OR=1.669, CI: 1.208, 2.306, $p = 0.002$).

The parameter estimates from the sensitivity analyses using GEE were identical to those shown in Table 5; standard errors differed slightly between the models.

DISCUSSION

Although several studies have attempted to quantify the incidence and prevalence of RSA,^{26,30,42-49} their methodologies and results have varied widely, leading to the conclusion that the actual rate of this phenomenon is unknown.²⁵ Complicating the study of RSA is underreporting both in chart documentation and research studies.^{24,25,27} Underreporting may have many causes, including acclimation to and tolerance of abusive behavior as well as fear of reprisals from resident families or administrators or job loss.²⁴

In this large study of resident to staff aggression in nursing homes, we found the phenomenon to be highly prevalent, with 15.6 % of residents reported to exhibit aggressive behavior toward a staff person during a 2-week period. The most common behaviors were verbal aggression, but assaultive physical behavior was also prevalent. Even though the frequency of sexual aggression was low (less than 1 %), these actions have the potential to cause emotional distress to staff members.

Four resident-level factors were associated with RSA in multivariate analyses: receipt of greater levels of morning

Table 5. Logistic Regression Analyses Examining Resident to Staff Aggression Status in Relation to Resident Characteristics

	Staff informant-reported characteristics and resident demographic data						Sensitivity analyses including patient-reported characteristics and observations*					
	(N=1,464)						(N=1,379)					
	B	SE	Sig.	OR	95 % CI for OR		B	SE	Sig.	OR	95 % CI for OR	
					Lower	Upper					Lower	Upper
Intercept	-3.963	0.807	<0.001	0.019	0.004	0.093	-4.071	0.841	<0.001	0.017	0.003	0.089
Age	0.005	0.009	0.620	1.005	0.986	1.024	0.005	0.010	0.599	1.005	0.986	1.024
Female	0.203	0.208	0.332	1.225	0.813	1.846	0.147	0.212	0.488	1.158	0.764	1.756
Black	-0.454	0.256	0.077	0.635	0.384	1.051	-0.468	0.255	0.068	0.626	0.379	1.036
Hispanic	-0.561	0.238	0.019	0.571	0.357	0.912	-0.560	0.245	0.023	0.571	0.353	0.926
Married	0.452	0.231	0.051	1.572	0.998	2.475	0.400	0.235	0.090	1.492	0.940	2.368
Disordered Behavior Index	1.868	0.179	<0.001	6.476	4.552	9.214	1.775	0.182	<0.001	5.900	4.121	8.449
Mood Symptoms Scale	0.829	0.158	<0.001	2.291	1.678	3.127	0.884	0.158	<0.001	2.420	1.772	3.303
Staff-reported assistance received in Basic Activities of Daily Living (BADL) (morning care) Scale	0.771	0.176	<0.001	2.161	1.530	3.054	0.770	0.178	<0.001	2.160	1.521	3.068
Observed Total Behavior Disorder Index	—	—	—	—	—	—	0.512	0.164	0.002	1.669	1.208	2.306

All scales and indices are in the disordered or impaired direction

Analyses were adjusted for clustering within units and within CNAs

The mean cluster sizes are as follows: CNA: mean cluster size is 5.57 residents (SD= 3.46); the minimum is 1 and maximum is 20

Unit cluster size: 51 units; the mean cluster (unit) size is 30.34 (SD= 9.45); the minimum is 10 and the maximum is 44

*Cognitive impairment, as measured by the CARE Diagnostic Scale, although significant at the zero-order level, was not significant in the multivariate analyses. Moreover, the cognitive disorder scale was correlated with both performance and reported ADL measures > 0.50 , and it was removed to avoid collinearity. The performance ADL resident assessment measure was not included in the sensitivity analysis due to collinearity with the staff-reported BADL measure

ADL assistance, more affective symptoms, greater general behavioral disturbance, and being of Hispanic background (which, unlike the aforementioned variables, was associated with lower rates of aggression toward staff).

These findings are consistent with previous work in which staff are typically asked to recollect their experiences with aggressive patients over some prior period; high but variable rates of aggression are reported. These studies have also found that RSA occurs most commonly during provision of personal hygienic care, including bathing, showering, oral hygiene, dressing, and toileting.^{24,25,30,50,51} Indeed, a particularly striking finding of this study is the provision of morning care as a situational risk factor. Although popular wisdom suggests the “sundowning” period as a likely time for resident-staff altercations, these findings suggest that special characteristics of morning care may place staff at particular risk. Further research, including qualitative and observational studies, would be useful in further exploring this phenomenon.

An intriguing and unexpected finding was that being a non-White resident was associated with a lower risk of being an aggressor; this was true of both African-American and Hispanic residents in bivariate analysis, although only being Hispanic remained significant in the final logistic model. There are a number of possibilities that might explain this relationship. Insofar as the vast majority of CNAs in this study were from minority backgrounds (between 91 and 97 %), the finding may reflect a lower likelihood of aggression when the CNA-resident dyad is concordant (i.e., a resident is less likely to engage in RSA with a staff member of the same background). This latter hypothesis is supported in part by the work of Ramirez and colleagues,^{52,53} who found ethnic and racial conflict between residents and staff to be common and a source of staff burnout and demoralization. In that study, it was also posited that disinhibition by residents with cognitive impairment could lead to greater ethnically and racially motivated name-calling. An alternative explanation could be reporting bias, wherein minority staff members are more likely to recollect or report RSA against them by residents of different ethnicity or races.

This study has several limitations. Although we were not able (due to IRB restrictions) to collect detailed demographic or clinical data on the staff reporting RSA, limiting our ability to further probe the relationship between ethnicity and RSA, we obtained some data in the aggregate. Approximately 63 % to 73 % were black, 10 % to 14 % Hispanic, and 13 % to 15 % Asian. Almost all (93 % to 94 %) were women. Zeller and colleagues have collected more extensive data in this regard and found several staff factors to be associated with physical RSA, including younger age, female gender, lower educational attainment, and higher confidence in managing physical aggression.⁵⁴

Results from staff of five nursing homes in a single urban area may not be generalizable to all nursing homes. Staff report of RSA may be unreliable because of fear of reprisals from superiors or resident family as well as bias due to acclimation to aggressive behavior on the part of staff providing daily care to these residents. This potential underreporting represents a significant methodological challenge for this as well as all studies of RSA. We have attempted to minimize under-reporting by (1) conducting private interviews with staff (2) in the context of a broader staff interview discussing all types of aggressive resident behavior, not only RSA, and (3) including questions about RSA at the end of the interview, when the CNA was likely most comfortable discussing their own victimization. Another limitation of this study is that we were able to interview only one caregiver. The primary caregiver on the day shift was selected because earlier research had shown that the majority of direct care was provided by the day shift.⁵⁵ It is possible that a small percentage of residents only engaged in aggression toward staff in the evening or at night. This would result in an underestimate of the extent of aggression toward staff. Thus the estimate of almost 16 % of residents engaging in aggressive acts toward staff is conservative. Our study design, which focuses on identifying residents who engage in RSA as the unit of analysis (rather than event rates), as well as our 2-week look-back period, preclude us from reporting an annual prevalence for this phenomenon, although this work suggests it is relatively common. Although the consequences of RSA are likely to be serious—including the physical and emotional toll on staff, the effect on job satisfaction, demoralization and staff turnover, and the potential for reactive abuse or neglect by staff—our research was not designed to measure these factors.

Nonetheless, we believe our design is a methodologically rigorous approach to the study of this complex phenomenon, and based on a recent review⁵⁶ includes the largest resident and staff sample to date. It is also the first study to link characteristics of the resident aggressor to the victimized staff recipient directly and provides an estimate of the prevalence of residents who engage in aggression toward staff. This study may also serve as the basis for evidence-based intervention strategies for RSA reduction, such as trials to more aggressively address mood disorder in residents at risk, or perhaps the creation of staff educational programs addressing racial and ethnic conflict.

Further, we suggest that the pervasive nature of RSA documented in this study may offer new opportunities to improve quality of care. For example, interventions that avert or ameliorate RSA would likely lead to lower stress among care providers, whose risk of retaliating or of avoiding interactions with aggressive residents would in turn decrease. Although the study was designed to collect detailed information about actions taken to ameliorate

resident-to-resident aggression, the intent of this study was not to examine specific staff strategies to ameliorate RSA. However, during the course of observing the phenomenon in these facilities, many creative examples of staff intervening to defuse or prevent aggression were observed. These included: awareness of which residents should or should not be seated together at a meal or activity; distraction of residents when aggression was imminent or escalating; and mediating differences between residents who had a high likelihood of causing aggression (such as disagreements over which television programs to watch in a common area).

In this context, it is important to note that an evidence base exists on interventions for aggressive behavior by residents (but not specific to staff as a target). Future research should explore the applicability of such programs to the prevention of RSA. Interventions include identifying and ameliorating triggers of aggression such as pain, hunger, or environmental factors; use of behavioral logs; and pharmacological interventions.⁵⁷ These observations might be used to augment the sizable literature on management of dementia-related behavioral problems to develop new and efficacious interventions to prevent RSA.

In summary, this study of RSA in nursing homes suggests that the phenomenon is highly prevalent and worthy of greater attention from nursing home administrators, policymakers, and clinical researchers. RSA may negatively affect quality of care, resident and staff safety, and staff job satisfaction, morale, and turnover. Further studies are needed to understand how and why RSA occurs and to develop evidence-based interventions to prevent it or minimize its consequences.

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