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Family Members' Reports of Non-Staff Abuse in Michigan Nursing Homes

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Recent research showed that mistreatment of nursing home residents by other residents may be highly prevalent. The present study examined the issue from family members' perspectives. The data came from the 2005 and 2007 random-digit dial telephone surveys of Michigan households with a family member in long-term care. Based on family members' reports, about 10% of nursing home residents aged 60 and over were abused by non-staff in nursing homes (e.g., other residents and visitors) during the past 12 months. Family members were more likely to report non-staff abuse when the nursing home residents were younger, were female, had behavior problems, and had greater level of physical functioning. Family members who reported staff abuse were four times more likely to also report non-staff abuse.

KEYWORDS   nursing home, non-staff abuse, resident-to-resident abuse, dementia-related behaviors

INTRODUCTION

Elder mistreatment in long-term care settings has received national attention for the past several decades. Most of the research in this area has focused on the incidence, prevalence, and risk factors of abuse and neglect perpetrated by staff in nursing homes (Gibbs & Mosqueda, 2004; Harris & Benson, 2006; Hawes, 2003; Lindbloom, Brandt, Hough, & Meadows, 2007). However, not all nursing home abuse is perpetrated by staff, and recent research suggests that resident-to-resident abuse may be highly prevalent (Lachs, Bachman, Williams, & O'Leary, 2007; Rosen, Pillemer, & Lachs, 2008).

In their study of resident-to-resident abuse, Rosen and colleagues (2008) found that over 80% of nursing home residents had cognitive impairment that often led to behavior problems such as wandering, calling-out, and physical aggression. In addition, a significant number of elders with severe mental illness were being referred to nursing homes. Placing cognitively impaired or mentally ill patients together in communal living can provide opportunities for resident-to-resident abuse (Rosen et al., 2008).

As early as 1990, the Office of Inspector General, one of the agencies in the Department of Health and Human Services, reported that although nursing home staff was the primary source for resident abuse, other residents, family members, and visitors also contributed to resident abuse (e.g., physical abuse, verbal abuse, and personal property abuse) (Kusserow, 1990). However, two decades later, there is scant literature on non-staff abuse in nursing homes. The three papers that have empirically addressed this issue have limitations on generalizability due to clinical sampling bias (police and nursing home reports) (Lachs et al., 2007), reliance on small nonrepresentative samples (Rosen et al., 2008), and the exclusive focus on resident-to-resident violent incidents in nursing homes (Shinoda-Tagawa et al., 2004).

In our study, we examined abuse and exploitation perpetrated by non-staff (e.g., residents, visitors, family members) in Michigan nursing homes based on two waves of a random survey. We relied on a subsample of the Michigan Survey of Households with Family Members Receiving Long-Term Care Services to estimate the extent and correlates of elder abuse by non-staff members in nursing homes from family members' perspectives.

The Extent of Elder Mistreatment by Non-Staff in Nursing Homes

We define non-staff abuse as maltreatment of nursing home residents by people who are not staff or caregivers in the nursing homes. Maltreatment is broadly defined and can include physical, sexual, verbal, emotional, and material abuse. It is very difficult to estimate the prevalence of elder abuse by non-staff in nursing homes for a number of reasons. A significant proportion of nursing home residents have cognitive problems and therefore self-reports

may not be feasible or reliable (Harris & Benson, 2006). In addition, nursing home staff and administrators may be reluctant to report abuse because they fear adverse publicity, investigations, and fines (Page, Conner, Prokhorov, Fang, & Post, 2009). Official data from police records and state Ombudsman programs are often biased and limited because only the most overt cases are reported (Rosen et al., 2008). Nonetheless, by piecing together evidence from various sources (police records, Adult Protective Services [APS], Ombudsman programs, staff, residents, and family members), it is clear that the problem is serious with deleterious consequences (Harris & Benson, 2006; Kusserow, 1990; Lachs et al., 2007; Shinoda-Tagawa et al., 2004). For example, a recent study on Ombudsman programs found that resident-to-resident abuse was one of the most frequently reported types of abuse in nursing homes (Jogerst, Daly, & Hartz, 2005). Another study using Virginia APS data over a 5-year period found that the majority of the perpetrators in substantiated sexual abuse cases were other nursing home residents (Teaster & Roberto, 2004). In a pilot study conducted in a long-term care facility, 2.4% and 7.3% of the 82 residents reported that they experienced physical and verbal resident-to-resident abuse respectively during the past two weeks (Rosen et al., 2008).

Correlates of Elder Mistreatment by Non-Staff in Nursing Homes

Previous research on elder abuse by non-staff has looked at risk factors of resident-to-resident abuse (RRA) rather than the more general non-staff abuse (NSA). However, the identified risk factors for RRA are worth examining as possible risk factors for NSA because a significant proportion of NSA might be RRA.

Cognitive impairment and dementia-related behaviors were associated with RRA in one case-control study. Researchers found that those who had injury due to an incident with another nursing home resident were more likely to be cognitively impaired, prone to wandering, or verbally abusive to other residents or staff (Schinoda-Tagawa et al., 2004). A cognitively impaired person could be both a perpetrator and victim of RRA (Lachs et al., 2007). Another correlate of RRA was moderate functional dependency. Those most likely to be victims of RRA were those who had physical capacity to assault or abuse other residents. The third correlate for RRA was gender. In one study male residents were twice as likely to be injured by another resident as female residents (Schinoda-Tagawa et al., 2004).

Finally, facility culture may be a risk factor for non-staff abuse. Some nursing homes were poorly managed; abuse and neglect were tolerated in the victim's environment such that both staff members and noncaregivers, who most likely were other residents, were able to behave in abusive ways without serious consequences. As Griffin (1999) put it, "The result of staff neglecting a patient may result in that patient exploiting other residents

physically, sexually, or emotionally. Conversely, the neglect of a patient also may result in that person being left vulnerable to various forms of abuse by other residents" (p. 272).

METHODS

Data

The sample comes from two waves of the Michigan Survey of Households with Family Members Receiving Long-Term Care Services, conducted in 2005 and 2007, respectively. The survey instrument was designed by researchers from Michigan State University (MSU), approved by the MSU Institutional Review Board, and funded by the Centers for Medicaid/Medicare Service. Michigan adults, age 18 and older, were selected for the survey by list-assisted random-digit dialing. In the 2005 survey, 163,513 numbers were dialed. About 34.9% of the numbers dialed were good numbers (i.e., not a business or fax number, etc.), and cell phones were excluded. Twenty-two percent of the numbers dialed proceeded to the screening stage. Of the good numbers, only those in which there was no contact in more than eight attempts were excluded. About 21.2% of the numbers dialed were screened out, because they represented persons who were under the age of 18 years or did not have a family member in long-term care, or did not have guardianship or power of attorney for that individual, etc. The cooperation rate (defined as screen outs plus quota outs plus completed interviews)/(unscreened refusals plus all screened response) was 89.0%. In the 2007 survey, 392,551 numbers were dialed, and 29.7% were good contacts. Twenty-two percent of the numbers dialed proceeded to the screening stage, and 21.6% were screened out. The cooperation rate was 96.6%. We combined the data from the two waves ($N = 2,004$) to increase the analytical sample size. The survey questions were identical in the two waves.

Family Members as Proxies

Family members were the targeted sample as opposed to the residents in long-term care because of issues related to (a) the difficulties of accessing a population who primarily resided in institutions; (b) the risk for potential human-subjects violations due to inability to obtain informed consent from cognitively impaired individuals; and (c) disabilities associated with the individual's placement in nursing homes that also prevented accurate reporting of abuse, such as dementia or communication disorders. Although family members may not notice abuse until it was ongoing (Hawes & Kayser-Jones, 2003), they have been found to be the most common reporters of confirmed elder abuse cases for APS (Teaster, Dugar, Otto, & Mendiondo,

2006). In addition, in a recent study on theft in nursing homes, family members who reported missing items in the nursing homes in the past year were more likely to say that missing items were lost or misplaced as opposed to being stolen. This suggested that family members did not make accusations lightly (Harris & Benson, 2006). Therefore, by using relatives as a proxy, it is more likely that the reported abuse is ongoing rather than occasional.

The survey collected information including resident demographics, medical conditions, cognitive, and physical impairments, and instances of staff abuse and neglect and non-staff abuse. No such data exist at the local, state, or national level. In this study, our analytic sample was restricted to the 964 knowledgeable relatives of, or adults responsible for, a nursing home resident age 60 years and older.

Measures

DEPENDENT VARIABLE

A single question about non-staff abuse was asked, "*Now we want to talk about mistreatment by persons in the care setting that are not staff or care givers. Thinking just about the last 12 months, how many incidents would you say they have experienced?*" The outcome variable, non-staff abuse, is defined as the presence (coded 1) or absence (coded 0) of abuse.

INDEPENDENT VARIABLES

The covariates include demographic characteristics of the nursing home residents, health diagnoses, physical and cognitive impairment, behavior problems, and the occurrence of any of the seven types of staff abuse, as reported by survey respondents.

Demographics. Two demographic variables were used in the analysis: age and gender. Age was measured in years.

Health-related problems. Psychiatric diagnosis was measured by a dichotomous variable that takes on the value of 1 if the respondent reported that the nursing home resident has been diagnosed with a specific psychiatric problem and a value of 0 otherwise. Physical functioning was measured by counting the number of functional activities of daily living (ADLs) that the nursing home resident could perform independently. The six functional ADL items were bathing, dressing, getting around inside, toileting, getting in or out of bed or a chair, and eating. The final measurement scale ranges from 0 to 6. Cognitive impairment was measured by a dichotomous variable that takes the value of 1 if the respondent reported that the nursing home resident had (a) thinking, memory, or communication difficulties such as failing memory, mental confusion, difficulty concentrating, or difficulty communicating; (b) has been diagnosed with Alzheimer's disease; or (c) has

been diagnosed with other dementias such as dementia related to stroke, and 0 otherwise. Behavior problems was measured by a dichotomous variable that takes the value of 1 if the respondent reported that the resident had behavior problems such as being abusive physically or verbally, or actively resisting care and 0 otherwise.

Victimization by nursing home staff. Staff abuse was dichotomous and defined as the presence of either physical, caretaking, verbal, emotional, neglect, sexual, or material abuse or the absence of all seven types of abuse by paid caretakers during the past 12 months. The questions about staff abuse were prefaced by, *"I am going to describe to you some general categories of things that may or may not have happened to the person receiving care. We are interested in all incidents of mistreatment that may have happened to this person whether or not they were reported [in the last 12 months] . . ."* Then a series of separate descriptions and questions about different types of abuse by staff or other caregivers were given. The types of abuse were physical, caretaking, verbal, emotional, neglect, sexual, and material with descriptions as follows. Physical abuse included physical mistreatment such as striking, hitting, beating, pushing, shoving, slapping, and kicking. Caretaking abuse included inappropriate use of physical restraints, unjustified force-feeding, or physical punishment, etc. Verbal abuse included yelling, cursing, insults, intimidation, humiliation, etc. Emotional abuse included being treated disrespectfully or like a child, giving the silent treatment, etc. Neglect included failure to rotate the person to prevent bed sores; failure to provide a person with food, water, or hygiene; or ignoring requests for help, etc. Sexual abuse included forced sex, sexual contact without consent, or unwanted touching, etc. Material abuse included theft of money or possessions, misuse of a person's funds, property, etc.

Statistical Analysis

The descriptive analysis of all variables was given first, followed by bivariate analyses of non-staff abuse and the correlates using chi-square tests and two-sample *t* tests. Then a logistic regression model was run which related the non-staff abuse to the correlates while controlling for age and gender. To quantify the effect of these risk factors, odds ratios were reported. The software used for all statistical results was SPSS for Windows, 17.0.0, 2008 (SPSS, 2008).

RESULTS

Descriptive Analysis

The mean age of nursing home residents was 83.8 years. About 28% were male and 72% female. While 36.5% of respondents reported that a family

TABLE 1 Reported Rates of Abuse and Health Problems for Nursing Home Residents

Characteristics	%	N
Non-staff abuse	10	941
Staff abuse	36.5	919
Psychiatric diagnosis	15.5	934
Behavioral problems	22.2	954
Cognitive impairment	85.3	954

TABLE 2 Distribution of Physical Functioning (Number of ADLs* the Person Can Do), $N = 910$

Physical Functioning	0	1	2	3	4	5	6
	21.5%	30.5%	12.3%	9.6%	9.1%	9.0%	7.9%

*The six functional activities of daily living (ADL) items were eating, bathing, dressing, getting around inside, toileting, and getting in or out of bed or a chair.

member in a nursing home experienced staff abuse within the past year, only 10% reported non-staff abuse. In terms of health conditions, about 15.5% of nursing home residents had a psychiatric diagnosis, 22.2% had behavioral problems, and 85.3% had cognitive impairment (see Table 1). For physical functioning, there were 21.5% of the respondents who could not perform any of the six functional ADLs, and only 7.9% could perform all six ADLs (see Table 2).

Bivariate Analysis

Chi-square tests and two-sample t tests were used to investigate the unadjusted effect of each correlate as well as gender and age on the presence of non-staff abuse. The conditional distributions of the frequency of non-staff abuse were computed for the groups with cognitive impairment, psychiatric diagnosis, behavior problems, and staff abuse. Results are reported in Table 3. The mean age and mean number of functional ADLs were computed for those who experienced non-staff abuse as well as for those who did not (see Table 4).

TABLE 3 Percent of Non-Staff Abuse by Risk Factors

Cognitive Impairment		Psychiatric Diagnosis		Behavioral Problems		Staff Abuse	
Yes	No	Yes	No	Yes	No	Yes	No
($N = 793$)	($N = 138$)	($N = 140$)	($N = 774$)	($N = 201$)	($N = 731$)	($N = 342$)	($N = 563$)
10%	10.1%	14.3%	9.4%	16.4%	8.2%	19.0%	4.3%
chi-square = .004		chi-square = 3.06		chi-square = 11.83		chi-square = 51.15	
$p = .947$		$p = .080$		$p = .001$		$p < .001$	

TABLE 4 Mean Age and Mean Number of Functional ADLs Grouped by Experiencing Non-Staff Abuse or Not

		Age (N = 941)	Number of Functional ADLs (N = 894)
Experienced non-staff abuse	M (SD)	80.2 (8.65)	2.48 (2.09)
Did not experience non-staff abuse	M (SD)	84.2 (8.44)	2.08 (1.91)
t-statistic (p-value)		t = 4.39 (p < .001)	t = −1.83 (p = .066)

Note. M = mean; *SD* = standard deviation; ADLs = activities of daily living.

NON-STAFF ABUSE AND HEALTH-RELATED PROBLEMS

Neither cognitive impairment nor psychiatric diagnosis was significantly related to non-staff abuse reported by family members. However, having behavior problems was significantly related to non-staff abuse. The percent of persons experiencing non-staff abuse was double for those with behavioral issues (16.4%) compared to those without (8.2%). The mean number of functional ADLs was larger for the abused group than the unabused group, but the relationship was marginally significant ($p < .1$).

NON-STAFF ABUSE AND STAFF ABUSE

Among family members who reported staff abuse experienced by nursing home residents, about 19% also reported non-staff abuse. In contrast, only 4.3% of family members who did not report staff abuse mentioned incidents of non-staff abuse. The difference was statistically significant (see Table 3).

NON-STAFF ABUSE AND AGE

The mean age for those who experienced non-staff abuse was significantly lower for the abused group than for the unabused group (see Table 4). To further investigate the relationship between age and non-staff abuse, we calculated the conditional rate of abuse by decennial age cohort and found that the abuse rate decreased with age: 18.7% for the 60–69 age group, 13.7% for the 70–79 age group, 9.9% for the 80–89 group, and 5.4% for the 90-and-up age group. The rate of non-staff abuse for 60- to 69-year-old nursing home residents was 3 times the rate for those age 90 years and over.

Logistic Regression Results of Non-Staff Abuse

The independent variables in the logistic regression model included cognitive impairment, psychiatric diagnosis, behavioral issues, physical functioning, staff abuse, age, gender, and a dummy variable indicating the wave of

TABLE 5 Results for Logistic Regression Analysis of Non-Staff Abuse, $N = 820$

Variable	Adjusted Odds Ratio	95% Confidence Interval	p
Cognitive impairment	.81	(.42, 1.56)	.572
Psychiatric diagnosis	1.11	(.57, 2.05)	.750
Behavioral problems	1.80	(1.03, 3.16)	.039
Staff abuse	4.59	(2.73, 7.71)	<.001
Number of functional ADLs	1.16	(1.03, 1.31)	.018
Age	.95	(.93, .98)	<.001
Male	.54	(.30, .98)	.043

Note. ADLs = activities of daily living.

the survey. To justify collapsing the two waves of the survey into a single sample, the waves from 2005 and 2007 were compared, and no significant differences in the analytical variables were found. The "wave" variable also was included in the model but was not statistically significant. Therefore it is omitted from Table 5.

As expected from the bivariate analyses, neither cognitive impairment nor a psychiatric diagnosis was significantly associated with non-staff abuse. Two health-related problems were significantly associated with non-staff abuse: behavior problems and functional ADLs. While controlling for other variables, reported behavioral problems by family members increased the odds of non-staff abuse by 80%. For one increase in functional ADLs, the odds of non-staff abuse increased by 16%. Another significant correlate of non-staff abuse is family members' reports of staff abuse. Family members who reported staff abuse happened within the past 12 months were four times more likely to also report non-staff abuse. Both demographic variables were significantly associated with non-staff abuse. For every one year increase in age, the odds of non-staff abuse decreased by 5%. Being male decreased the odds of non-staff abuse by almost 46% (see Table 5).

DISCUSSION

To the authors' knowledge, this is the first generalizable random sample study of non-staff abuse in nursing homes from family members' perspective. It is also one of the first studies that did not rely on the nursing homes to report the incidents or restrict the sample to cognitively intact nursing home residents. While there are limitations with using family members as proxies (Harris & Benson, 2006; Hawes, 2003; Page et al., 2009), our study provides a valuable angle on abuse and exploitation committed by non-staff in nursing homes from family members' perspective.

Our study shows that according to reports of family members, 10% of nursing home residents age 60 years and older in Michigan nursing homes

experienced non-staff abuse in the past 12 months, whereas as high as 36.5% experienced some type of staff abuse. We identified five significant correlates of non-staff abuse reported by family members: behavior problems, physical functioning, abuse by staff, gender, and age. Three of these correlates (physical functioning, behavioral problems, and gender) also have been identified in prior research on resident-to-resident aggression.

Physical Functioning and Behavior Problems

Physical ability significantly increases the likelihood of non-staff abuse, thus supporting the hypothesis that physically active residents are more likely to get in harm's way in abuse instances perpetrated by other residents (Shinoda-Tagawa et al., 2004). As for the significant effect of behavior problems, it is possible that residents with behavior problems, such as being physically or verbally abusive, are more likely to have conflicts with other residents and visitors, placing them at higher risk for abuse.

Victimization by Staff

We find that residents in nursing homes who experienced abuse perpetrated by staff are also more like to experience non-staff abuse. The reason behind this finding is not clear. It is possible that family members who reported staff abuse had a general negative view of the nursing homes, where their relatives were receiving care and thought that non-staff abuse also must have occurred in that environment. However, to the best of our knowledge, no empirical study has found that dissatisfied family members tended to make random accusations against other residents and visitors in the nursing homes. On the other hand, it is also possible that those family members who reported staff abuse were more vigilant against all types of abuse compared to other family members who did not report staff abuse. More research is needed to clarify the association.

Gender

When controlling for other covariates, females are more likely than males to be abused by non-staff. The reverse gender effect is a bit surprising given that prior research on resident-to-resident aggression has identified being male as a risk factor (Shinoda-Tagawa et al., 2004). This is probably due to the fact that previous studies focused on the most violent form of resident-to-resident abuse which resulted in physical injury (Lachs et al., 2007; Shinoda-Tagawa et al., 2004) and males were likely to be involved in violent abuse instances. The present study, on the other hand, has a much broader definition of abuse.

Our research finds that cognitive impairment is not significantly associated with non-staff abuse in and of itself. In both bivariate and multivariate analyses of non-staff abuse, the association between cognitive impairment and non-staff abuse is not statistically significant. However, there is a significant relationship between cognitive impairment and behavior problems, and the latter is a strong risk factor for non-staff abuse. Our results suggest that behavior problems rather than cognitive impairment per se may lead to non-staff abuse.

Study Limitations

Despite the strengths of our study, there are a number of limitations. First, although our estimate of non-staff abuse is based on reports by family members who can be effective proxies for their frail elderly relatives in nursing homes, previous studies based on surveys and focus group interviews indicated that underreporting of mistreatment was common among family members because they might be unaware of the problem until it has been ongoing for some time (Hawes & Kayser-Jones, 2003), or they may be the perpetrators of the non-staff abuse and are motivated to underreport. It is difficult to ascertain whether family members' reports are more valid than institutional data sources, which also suffer from substantial underreporting (Robinson & Tappen, 2008; Rosen et al., 2008). Regardless, it is helpful to study nursing home abuses from a variety of sources (e.g., residents, family members, staff, administrators, ombudsmen) using a variety of methods (e.g., random sampling, focus groups, interviews) for a more accurate picture of this complex social problem. Second, due to survey limitations, we do not know the characteristics of the perpetrators (e.g., age, gender, health), who perpetrate the non-staff abuse (other residents or visitors), the types of non-staff abuse (e.g., physical abuse, verbal abuse, sexual abuse), and the context of non-staff abuse. Third, we were unable to examine how the characteristics of nursing homes or nursing home staff (e.g., staffing ratio, burnout, turnover, crowding) were associated with non-staff abuse. Fourth, all residents' health problems were reported by family members or responsible adults, some of whom might not have the most accurate information.

Practice and Policy Implications

The research on non-staff abuse has important policy implications. First, targeted educational programs on recognition, reporting, prevention, and proper handling of non-staff abuse should be implemented in nursing homes. Family members also should be educated about non-staff abuse so that they can better monitor the well-being of their relatives in nursing homes. Second, since we empirically find that resident behavior problems

are strongly associated with victimization by non-staff, staff should be trained to help other residents and visitors better cope with inappropriate or difficult behaviors, and to understand that problematic behaviors never warrant abuse. Third, our study identifies several potential risk factors for non-staff abuse, including being a victim of staff abuse, younger age, moderate physical functioning, and female gender. Nursing home directors and staff should pay closer attention to residents victimized by staff, a particularly vulnerable group, and be vigilant in protecting these patients from abuse by other residents and visitors. Greater monitoring of those with behavior problems also may help to reduce the incidents.

In summary, staff abuse in nursing homes has received much more public and academic attention in comparison to research focused on the incidence, prevalence, and risk factors of non-staff abuse. Further research is desperately needed in this neo-nascent field of elder abuse.

REFERENCES

Gibbs, L. M., & Mosqueda, L. (2004). Confronting elder mistreatment in long-term care. *Annals of Long-Term Care: Clinical Care and Aging*, *12*, 30–35.

Griffin, LW. (1999). Understanding elder abuse. In R. L. Hampton (Ed.), *Family violence: Prevention and treatment* (2nd ed., pp. 260–286). Thousand Oaks, CA: Sage Publications.

Harris, D. K., & Benson, M. L. (2006). *Maltreatment of patients in nursing homes: There is no safe place*. New York, NY: Haworth Pastoral Press.

Hawes, C. (2003). Elder abuse in residential long-term care settings: What is known and what information is needed? In R. J. Bonnie & R. B. Wallace (Eds.), *Elder mistreatment: Abuse, neglect, and exploitation in an aging America* (pp. 446–500). Washington, DC: National Academies Press.

Hawes, C., & Kayser-Jones J. (2003). Abuse and neglect in nursing homes and institutions. *Annals of Long Term Care*, *11*(8), 17–20.

Jogerst, G., Daly, J., & Hartz, A. (2005). Ombudsman program characteristics related to nursing home abuse reporting. *Journal of Gerontological Social Work*, *46*(1), 85–98.

Kusserow, R. P. (1990). *Resident abuse in nursing homes: Understanding and preventing abuse*. Office Inspector General. Retrieved from http://oig.hhs.gov/oei/reports/oei-06-88-00360.pdf

Lachs, M., Bachman, R., Williams, C. S., & O'Leary, J. R. (2007). Resident-to-resident elder mistreatment and police contact in nursing homes: Findings from a population-based cohort. *Journal of the American Geriatrics Society*, *55*(6), 840–845.

Lindbloom, E. J., Brandt, J., Hough, L. D., & Meadows, S. E. (2007). Elder mistreatment in the nursing home: A systematic review. *Journal of the American Medical Directors* Association, *8*(9), 610–616.

Page, C., Conner, T., Prokhorov, A., Fang, Y., & Post, L. (2009). The effect of care setting on elder abuse: Results from a Michigan survey. *Journal of Elder Abuse & Neglect*, *21*, 239–252.

Robinson, K, & Tappen, R. (2008). Policy recommendations on the prevention of violence in long-term care facilities. *Journal of Gerontological Nursing*, *34*(3), 10–14.

Rosen, T., Lachs, M. S., Bharucha, A. J., Stevens, S. M., Teresi, J. A., Nebres, F., & Pillemer, K. (2008). Resident-to-resident aggression in long-term care facilities: Insights from focus groups of nursing home residents and staff. *Journal of the American Geriatrics Society*, *56*(8), 1398–1408.

Rosen, T., Pillemer, K., & Lachs, M. (2008). Resident-to-resident aggression in long-term care facilities: An understudied problem. *Aggression and Violent Behavior*, *13*(2), 77–87.

Shinoda-Tagawa, T., Leonard, R., Pontikas, J., McDonough, J. E., Allen, D., & Dreyer, P. I. (2004). Resident-to-resident violent incidents in nursing homes. *Journal of the American Medical Association*, *291*(5), 591–598.

SPSS for the Windows (Rel. 17.0 2008) [Computer software]. Chicago, IL: SPSS, Inc.

Teaster, P. B., Dugar, T. A., Otto, J. M., & Mendiondo, M. S. (2006). *The 2004 survey of state protective services: Abuse of adults 60 years of age and older*. Washington, DC: National Center on Elder Abuse.

Teaster, P. B., & Roberto, K. A. (2004). Sexual abuse of older adults: APS cases and outcomes. *The Gerontologist*, *44*(6), 788–796.