Journal of Elder Abuse & Neglect
Publication details, including instructions for authors and subscription information:
http://www.informaworld.com/smpp/title~content=t792303995

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Online publication date: 19 January 2011

To cite this Article Zhang, Zhenmei , Schiamberg, Lawrence B. , Oehmke, James , Barboza, Gia E. , Griffore, Robert J. , Post, Lori A. , Weatherill, Robin P. and Mastin, Teresa(2011) 'Neglect of Older Adults in Michigan Nursing Homes', Journal of Elder Abuse & Neglect, 23: 1, 58 — 74
To link to this Article: DOI: 10.1080/08946566.2011.534708
URL: http://dx.doi.org/10.1080/08946566.2011.534708

Journal of Elder Abuse & Neglect, 23:58–74, 2011

ISSN: 0894-6566 print/1540-4129 online
DOI: 10.1080/08946566.2011.534708

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Although research on domestic elder abuse and neglect has grown over the past 20 years, there is limited research on elder neglect in nursing homes. The purpose of this study is to estimate the

This research was supported by a grant from the Centers for Medicaid/Medicare Service # CFDA 93.778 to Michigan State University. We wish to thank Chuntian Lu for his assistance in computer programming.

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incidence of elder neglect in nursing homes and identify the individual and contextual risks associated with elder neglect. Data came from a 2005 random digit dial survey of individuals in Michigan who had relatives in long term care. Our analytic sample included 414 family members who had a relative aged 65 or older in nursing homes. Results showed that about 21% of nursing home residents were neglected on one or more occasion in the last 12 months. Two nursing home residents' characteristics reported by family members appear to significantly increase the odds of neglect: functional impairments in activities of daily living and previous resident-to-resident victimization. Behavior problems also are associated with higher odds of neglect ($p = 0.078$). Policy implications of these results are discussed.

KEYWORDS elder neglect, mistreatment, nursing homes, ADL limitations, resident-to-resident abuse

INTRODUCTION

Neglect is the most prevalent but least understood form of elder mistreatment (Fulmer & Paveza, 1998). While there are a few studies that examined correlates of elder neglect in domestic settings perpetrated by family members (Fulmer et al., 2005; National Center for Elder Abuse at the American Public Human Services Association in collaboration with Westat, Inc., 1998; Rounds, 1992), much less research has focused on the incidence and risk factors for neglect in nursing homes (Schiamberg & Gans, 1999; Gibbs & Mosqueda, 2004). Older adults in nursing homes comprise a particularly vulnerable population because most have limitations in physical and mental functioning and depend on their caregivers for assistance with daily activities (Hawes, 2003). Until recently there has been no rigorous, population-based data on the prevalence and incidence of elder abuse and neglect in nursing homes. Using a broad definition of abuse recommended by the National Academy of Sciences ["(a) intentional actions that cause harm or create a serious risk of harm (whether or not harm is intended), to a vulnerable elderly by a caregiver or other person who stands in a trust relationship to the elderly, or (b) failure by a caregiver to satisfy the elder's basic needs or to protect the elder from harm" (National Research Council, 2003, p. 40)], Lachs and Pillemer (2004) concluded that "there is almost no scientifically credible empirical research about abuse in institutions" (p. 1264). Researchers interested in elder abuse and neglect in nursing homes have increasingly been made aware of the need to clearly define specific types of abuse (e.g., physical abuse, psychological abuse, financial abuse/exploitation or neglect) and to analytically consider the possibility of differential patterns of risk factors

for types of abuse/neglect (National Research Council, 2003).That said, to the best of our knowledge, there is little empirical research focusing on elder neglect in long-term care settings. This study presents one of the first analyses of risk factors for elder neglect in nursing homes using a random population survey.

The focus of our article is primarily on the health characteristics of the older adult, the interaction of the older adult with caregivers and staff in the institutional context, and contexts beyond the immediate institutional setting including the variation in visitation patterns of responsible family members as well as other friends and relatives of the older adult. In short, an ecological perspective that focuses on the key elements of the interaction between the older adult and the institutional caregiver, ranging from the more immediate contexts that contain the key participants or actors in a neglect scenario to more distal yet significant contexts (e.g., the family and friends of the older adult), provides a promising strategy for conceptualizing and measuring the central risk factors associated with neglect in nursing homes (Schiamberg et al., in press; Schiamberg & Gans, 1999).

Definition of Elder Neglect

Among all types of abuse, the definition of neglect is most controversial. Cases of neglect in nursing homes often raise difficult questions about whether the neglect was intentional (e.g., a nursing aide who refuses to change incontinent residents each time they are wet) or unintentional (e.g., a nursing aide who leaves the incontinent resident unchanged for long periods of time due to heavy work load) (Harris & Benson, 2006; Hawes, 2003). However, in general, elder neglect includes the refusal or failure of a caregiver to meet the needs of a dependent older person. Physical neglect typically refers to the refusal or failure to provide an elderly person with food, water, personal hygiene, clothing, medicine, shelter, personal safety, and comfort. Psychological neglect refers to leaving elderly persons alone for long periods of time without providing social stimulation (Fulmer et al., 2005). The current study examines physical neglect only.

Incidence of Elder Neglect

Neglect is one of the most common types of domestic abuse reported to Adult Protective Services (APS), accounting for 60% to 70% of all elder abuse reports made to APS in total (Fulmer et al., 2005). In 1998, the National Elder Abuse Incidence Study provided the first national estimate of the incidence of elder abuse and neglect in domestic settings based on a nationally representative sample of 20 counties in 15 states. Data of elder abuse came from two sources: (1) reports submitted to and substantiated by local APS agencies and (2) reports made by "sentinels" (i.e., trained individuals in

hospitals, police departments, senior centers, etc.) and presumed to be substantiated. It is estimated that there were 449,924 elderly persons aged 60 and over who experienced abuse and neglect in 1996. However, only 70,942 (16%) of those cases were reported to and substantiated by APS agencies and the remaining 378,982 (84%) were reported by sentinels but *not reported to APS*, suggesting that four out of five cases of abuse went unreported. Among the 70,942 cases reported to and substantiated by APS, 48.7% were categorized as elder neglect. Detailed information about these estimates appeared elsewhere (National Center for Elder Abuse at the American Public Human Services Association in collaboration with Westat, Inc., 1998). Despite the paucity of data about neglect in nursing homes, a few surveys of American nursing home staff as well as residents and family members indicate that neglect is also a serious problem in nursing homes (Goergen, 2000). For example, 37% of certified nursing assistants in a survey reported that they had witnessed neglect of residents; as high as 95% of residents interviewed in the Atlanta Long-Term Care Ombudsman Study reported that they had experienced neglect or witnessed neglect of other residents (Hawes, 2003). Although neglect may be a frequent type of abuse in nursing homes, previous research has typically focused on physical, sexual, and verbal abuse or looked at neglect together with physical and other types of abuse—neglect is rarely studied on its own. One reason may be that it is sometimes difficult to recognize and detect incidents of neglect in the elderly because physical markers for neglect such as pressure ulcers, skin tears, malnutrition, and dehydration may be mistakenly attributed to consequences of chronic diseases rather than the failure of the staff to fulfill caregiving obligations (Gibbs & Mosqueda, 2004). This article examines a constellation of risk factors for neglect that includes attributes of the nursing home residents, environmental factors such as the location of nursing homes, and social support networks outside the nursing homes.

Risk Factors For Elder Neglect

What is known about risk factors associated with elder neglect comes largely from studies in domestic settings. Statistics from the first National Elder Abuse Incidence Study indicated that the majority of victims of neglect were women, aged 80 and above, had annual incomes that were between $5,000 and $9,999 in 1996, and suffered from physical and mental impairments. Fulmer et al. (2005) found that characteristics of the abuser, including poor physical and mental health and a history of childhood trauma (e.g., experience of childhood physical neglect), were significantly associated with domestic elder neglect.

Specific literature focusing on elder neglect in nursing homes is rare, but research on mistreatment of elders in nursing homes provided insights into the general pattern of risk factors for institutional abuse and neglect. Results

from surveys of nursing home staff suggest that mistreatment in nursing homes reflects an interaction between the vulnerabilities of the elder resident and characteristics of the situation and the perpetrator. For example, Pillemer and Moore (1990) found that physical abuse of residents was predicted by staff burnout, experiencing patient aggression, and high conflict with patients, while psychological abuse was predicted by high levels of personal stress, burnout, patient aggression, having a negative attitude toward patients, and younger age. Explanations have focused on higher caregiver burden and stress as well as the greater likelihood for aggressive residents to be denied opportunities for personal choice (Meddaugh, 1993). However, none of these risk factors associated with physical and psychological abuse have been tested for neglect in nursing homes. This is problematic as previous research indicated that different types of abuse may have different correlates (Cooney & Mortimer, 1995). A few institutional characteristics also were found to be associated with higher rates of elder abuse and neglect, including location in metropolitan areas as well as facility size as measured by the number of beds (Jogerst, Daly, Dawson, Peek-Asa, & Schmuch, 2006; Pillemer & Bachman-Prehn, 1991).

Older individual vulnerabilities

Some studies indicate that an older individual's vulnerabilities, particularly related to mental, cognitive, and physical impairment, are related to neglect in both the community and the nursing homes. For example, Fulmer et al. (2005) found that the victims of neglect in domestic settings had more depression, lower scores on cognitive tests, higher number of functional impairments, and more childhood physical abuse than those elderly who did not experience neglect. In addition, researchers have shown that dependency needs of individuals (e.g., mental confusion, immobility, incontinence, and assistance with meals) are significantly associated with neglect in the community (Rounds, 1992). As we have mentioned earlier, studies of risk factors for elder neglect in nursing homes are quite limited, but it is highly possible that dependency needs of nursing home residents are also predisposing factors for neglect in nursing homes. As one abuse investigator said, "Residents who are the most in need, the most disabled, the most infirmed, have a tendency to be neglected more than the residents who are able to speak for themselves and request help." (Shaw, 1998, p.16).

Social isolation

Numerous studies using community samples have confirmed the positive association between social isolation of the older adults and the risk of abuse and neglect. Researchers suggest that social isolation could increase family

stress and make it difficult for other people to intervene in crisis (Lachs, Berkman, Fulmer, & Horwitz, 1994; Lachs & Pillemer, 1995; Lachs, Williams, O' Brien, Hurst, & Horwitz, 1997; Pillemer, 1988). Very few studies have specifically addressed social isolation in long-term care settings due to the difficulty of collecting such data (Nerenberg, 2000; Tarbox, 1983), although a few studies suggest that those who have infrequent visitors are at greater risk for abuse and neglect (Donohue, Dibble, & Schiamberg, 2008; Shaw, 1998; Wierucka & Goodrige, 1996). Although it is inconclusive from the limited literature whether a lack of social contact with family members/friends would put the elderly at higher risk for neglect in nursing homes, there is evidence that families can play an important role in monitoring the quality of care their relatives receive in nursing homes (Bowers, 1988; Collier, Lawrence, & Prawitz, 1994). Randy Thomas, president of the National Committee for the Prevention of Elder Abuse, urged family members to frequently visit their relatives in nursing homes. He said, "If they don't have a lot of visitors and they have cognitive issues, then [staff] forget they are real people. They become more of a body that you have to change and feed, and it's easier to neglect them." (Billups & Lostys, 2006, p. 103).

The Nature of the Study

The present study contributes to our understanding of neglect in nursing homes in several ways. First, most of the above cited studies relied on victim or caregiver accounts of the nature and frequency of neglect in communities and nursing homes. Victims of elder neglect, assuming they are available, often are unable to answer questions pertaining to neglect truthfully due to fear, embarrassment, and humiliation. In addition, a significant proportion of nursing home residents have cognitive problems and therefore self-reports may not be feasible or reliable. On the other hand, caregivers in nursing homes (e.g., nurses and certified nurse assistants) are in many instances the individuals who have committed the abuse, and hence they too will most probably not be forthright (Hawes, 2003). An alternative is to ask family members who are familiar with the care of the institutionalized older adult to serve as proxy respondents for their loved ones (Harris & Benson, 2006). Our data came from a survey that relied on family members' reports of elderly abuse and neglect in nursing homes. This has several advantages. First, by using family members as proxies for persons in long term care, the survey could randomly sample eligible participants, which avoided selection bias in many prior studies that were based on nonrandom samples such as ombudsmen reports, emergency room reports, and APS agencies (Fulmer et al., 2005; Page, Conner, Prokhorov, Fang, & Post, 2009). Second, previous research has shown that family members can be keen observers and fairly reliable reporters of abuse and neglect (Teaster, Dugar, Otto, & Mendiondo, 2006). In addition, because our survey was conducted through

telephone contact and did not try to identify the respondent, the person receiving care, or the care setting, family members were able to report abuse and neglect in nursing homes without fear of retaliation (Page et al., 2009). As far as we know, this is one of the few studies that used a *random-sample* design to assess the incidence and risk factors of neglect in nursing homes.

In general there are two questions driving this research:

1. What is the incidence of neglect over a 12-month period among elderly persons aged 65 and above living in Michigan nursing homes?
2. What are the risk factors for neglect among this population?

METHODS

Data

The Michigan Survey of Households with Family Members in Long-Term Care is a telephone survey of the noninstitutionalized civilian population of adults living in Michigan who have a relative in long-term care. The survey was designed by researchers from Michigan State University (MSU), approved by the MSU Institutional Review Board, and funded by the Centers for Medicaid/Medicare Services. Respondents were selected for the survey by random digit dialing, and the 1,002 persons interviewed represent a cross section of households in Michigan with a family member in long-term care. The interview process was implemented using a computer assisted telephone interview (CATI) system. All interviews were conducted by the professional staff of Schulman, Ronca, and Bucuvalas, Inc. during the period of October, November, and December in 2005. 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 reside 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 home care that also prevent accurate reporting of abuse, such as dementia or communication disorders. A considerable amount of disability, health, abuse, neglect, and exploitation histories were collected in the survey. This survey was undertaken explicitly to provide baseline data on the abuse, neglect, and exploitation of persons receiving long-term care services. No such data exist at either the state or national level. Details about the survey are available from the corresponding author upon request. The analytic sample in this study was restricted to those who had a relative aged 65 and older living in nursing homes ($N = 452$). Thirty-eight cases with missing reports on key independent variables were excluded, resulting in a final sample of 414 family respondents.

Measures

The dependent variable measuring neglect is based on the question:

> *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. . . . Now we want to talk about incidents of neglect by staff or other caregivers such as failure to rotate or flip this person to prevent bed sores, failure to provide a person with food, water, shelter, hygiene, medicine, comfort, or personal safety or ignoring request for help. Thinking just about the last 12 months, how many incidents would you say they have experienced?*

A binary variable was constructed taking on the value of 1 if one or more incidents of neglect had been reported by the family respondent and a value of 0 otherwise.

The independent variables include sociodemographic characteristics of the nursing home residents including age, gender, marital status, education, health related limitations, behavior problems, and social support indicators as well as a few institutional characteristics, as reported by family members. Details of these variables can be found in Table 1.

Statistical Analysis

A logistic regression model tested various risk factors of neglect in the nursing homes. We began our analysis by producing the incidence of neglect over the last 12 months in Michigan nursing homes and the means of key variables used in our model (see Table 2). We concluded with logistic regression results (see Table 3). The table reporting the results of the logistic regression model expresses the effects in terms of relative odds. All statistical analyses were carried out using SAS, version 9.

RESULTS

Sample Characteristics

There were 414 individuals in our analytic sample aged 65 and over in the nursing homes (see Table 2). Based on reports from family members, approximately 78% were not married, 74% were female, and the average age of the nursing home residents was 84 years old. In terms of educational attainment, 28% did not finish high school, 44% were high school graduates, 24% had some college education, and 4% had missing values on education. With respect to health-related problems, the average number of ADL limitations of the nursing home resident was 3.67/6. Approximately 22% were physically or verbally abusive or actively resisting care. As high as 79%

TABLE 1 Description of Variables

Sociodemographics	
Age (year)	Age of the nursing home resident
Unmarried	Unmarried = 1 if the nursing home resident is not married
Female	Female = 1 if the nursing home resident is female
Education	
< high school	Did not finish high school (reference category)
= high school	Finished high school
> high school/college	Received some college education
education missing	Education missing = 1 if the family member did not answer the question
Health-Related Limitations	
Activities of Daily Living limitations (ADL limitations)	The number of ADLs (i.e., bathing, dressing, getting around inside, toileting, getting in or out of bed or a chair, and eating) that the nursing home resident can not perform independently based on the family respondent's report.
Behavioral problems	A binary variable taking the value of 1 if the respondent reported that the resident has "behavior problems such as being abusive physically or verbally, or actively resisting care" and 0 otherwise.
Memory problems	A binary variable taking the value of 1 if the respondent reported that the resident has "thinking, memory, or communication difficulties such as failing memory, mental confusion, difficulty concentrating, or difficulty communicating" and 0 otherwise.
Social Support	
Visits less than once a month	A binary variable taking the value of 1 if the respondent reported that he or she visited the nursing home resident less than once a month, and 0 otherwise.
Perceived emotional closeness	How would you characterize the closeness of your relationship with this person? A number between 1 and 10 represents the closeness of the relationship (1 = emotionally distant, 10 = emotionally close). We created a binary variable taking the value of 1 if the respondent reported "10" on the scale and 0 otherwise.
Monitors frequently	How often do people outside the care setting, like family, friends, and clergy, monitor the well being of this person? A number between 1 and 10 represents frequency of monitoring (1 = very frequently, 10 = rare). We created a binary variable taking the value of 1 if the respondent reported "1" on the scale and 0 otherwise.
Institutional Setting	
Rural area	A binary variable taking the value of 1 if the nursing home was located in a sparsely populated rural area and 0 otherwise.
Resident-to-resident abuse	A binary variable was constructed to measure whether or not the nursing home resident was mistreated in the nursing home by an individual who was not a caregiver or member of the nursing home staff in the past 12 months (most probably another resident). The variable takes the value of 1 if there has been at least one such incident and 0 otherwise.

TABLE 2 Characteristics of the Sample ($N = 414$)

Variables	Mean/proportions (M/%)
Reported neglect (%)	21.00
Sociodemographics	
Age (years)	84.43
Unmarried (%)	0.78
Female (%)	0.74
Educational attainment (%)	
< high school	0.28
= high school	0.44
> high school	0.24
Education missing (%)	0.04
Health-related limitations	
Number of ADL limitations (0–6)	3.67
Behavioral problems (%)	0.22
Memory problems (%)	0.79
Social support	
Visits less than once a month (%)	0.24
Perceived emotional closeness (%)	0.48
Monitors frequently (%)	0.41
Institutional characteristics	
Resident-to-resident abuse (%)	0.10
Rural area (%)	0.21

TABLE 3 Logistic Regression Model of Incidents of Neglect in Nursing Homes ($N = 414$)

Variables	Unstandardized coefficient B	Odds ratio
Sociodemographics		
Age	−0.03^{+}	0.97
Unmarried	0.18	1.20
Female	0.40	1.50
Educational attainment		
< high school		
= high school	−0.27	0.76
> high school	−0.05	0.95
Education missing	−0.69	0.50
Health-related limitations		
Number of ADL limitations (0–6)	0.26**	1.30
Behavioral problems	0.54^{+}	1.72
Memory problems	0.23	1.26
Social support		
Visits less than once a month	−0.63^{+}	0.53
Perceived emotional closeness	0.03	1.03
Monitors frequently	−0.11	0.90
Institutional characteristics		
Resident-to-resident abuse	1.43**	4.18
Rural area	−0.43	0.65

$^{+}p < 0.1$. $^{*}p < 0.05$. $^{**}p < 0.01$.

of nursing home residents had thinking, memory, or communication difficulties. Most respondents reported that they visited their family members in nursing homes more than once a month. Only 24% of them said that they visited the nursing home residents less than once a month. Furthermore, about 48% of family members reported a very close relationship with their loved ones in nursing homes. About 41% of them reported that family, friends, and clergy monitored the well-being of the care recipients frequently. In addition, about 10% of the nursing home residents were reported to have experienced mistreatment from persons that are not caregivers or staff in the nursing homes, most probably other residents in the nursing homes, in the past 12 months. About 21% of nursing homes were located in rural areas.

Correlates of Neglect

Twenty-one percent of family members reported elder neglect at least once in the last 12 months (see Table 2). The logistic regression analysis showed that ADL limitations appear particularly related to neglect in nursing homes. As can be seen in Table 3, with each additional ADL limitation, there is a significant increase in the risk of being neglected (odds increase by 1.30), or in percentage terms, approximately 30%. This is consistent with previous studies on neglect in nursing homes based mainly on focus group interviews of staff members and abuse investigators (e.g., Shaw, 1998). Another significant correlate of neglect in the nursing homes is previous mistreatment by noncaregiver/staff in the nursing homes (i.e., resident-to-resident abuse). Based on previous literature, the most common types of resident-to-resident abuse in long-term care facilities include physical, sexual, and verbal abuse (Rosen, Pillemer, & Lachs, 2008). We found that residents who were victims of resident-to-resident abuse in the past 12 months are 4 times more likely to be neglected than those without such mistreatment (as reported by their family members). The reason behind this is not clear. We suspect that resident-to-resident abuse may be an indicator of limited oversight, poor management, or some other marginalizing individual characteristics, which correlate with high incidents of neglect. Unfortunately, data limitations prevent us from exploring this further. This important finding deserves further research. As far as we know, this association has never been reported in the literature. Moreover, patients with behavior problems are 72% more likely to be neglected than those without behavior problems. However, this effect was marginally significant ($p = 0.078$) with the control of other covariates.

We did not find strong evidence that social support received by residents significantly lowered the risk of neglect. Of the three indicators of social support, only one is marginally associated with neglect: monthly visits by the family member. We found that family caregivers who reported that they visited the patients *less than* once a month were *less* likely to report that the patient was neglected in the past 12 months ($p = 0.078$). We suspect

that those who visited less often might be less likely to discover incidents of neglect than those who visited more frequently. Surprisingly, none of the sociodemographic variables was significantly associated with neglect at $p < 0.05$.

Study Limitations

Despite the strengths of the study, there are several limitations. First, although our estimate of the incidence of elder neglect is based on reports by family members who are most knowledgeable about the elderly relative in nursing homes, previous studies based on surveys and focus group interviews indicated that underreporting of mistreatment was common among family members because (a) sometimes they were unaware of the problem until it has been ongoing for some time, and (b) they had a general reluctance to complain (Hawes & Kayser-Jones, 2003). Therefore, by using family members as proxies for nursing home residents, we may have missed some occasional or isolated abuse and neglect unknown to family members. However, it is important to point out that in the analytic sample, about 70% of the family members reported that they lived within 25 miles of the person in nursing homes, and 76% of them visited the person at least once a month. In addition, family members also reported that they had other relatives, friends, and clergy who frequently monitored the well-being of their loved ones in nursing homes. Therefore, what is measured in the study is most likely to be ongoing neglect that can be recognized by relatives and friends. Second, although we have found a statistically significant association between resident-to-resident abuse and the risk of neglect in nursing homes, due to data limitations, we do not know the characteristics of those perpetrators (e.g., gender, age, and cognitive status), the types of mistreatment (e.g., sexual abuse, physical abuse, or psychological abuse), and the context of mistreatment. Clearly more research is needed to understand resident-to-resident abuse in nursing homes. Third, we were unable to examine how the characteristics of nursing homes or nursing home staff (e.g., staffing ratio, health status of staff, childhood or adulthood abuse experienced by the staff) were associated with neglect due to data limitations.

DISCUSSION

This study examined the incidence of neglect and several potential resident and institutional characteristics that likely relate to neglect in nursing homes, including ADL limitations, cognitive deficiencies related to Alzheimer's disease and dementia, behavior problems, number of visits by family members, and being mistreated by other residents in the nursing homes, as reported by family members.

Our results, given study limitations, suggest that a strong relationship exists between ADL limitations and elder neglect in nursing homes. Higher numbers of limitations on activities of daily living significantly increase the odds of being neglected. An explanation for this finding is that frailty may diminish a person's ability to defend him or herself or to escape the situation, as has been speculated elsewhere (Lachs & Pillemer, 2004). It is important to recognize that health status of an older adult, per se, might be a less effective predictor of neglect than the translation of health status into specific limitations of activities of daily living that directly impact the relationship between an older adult and a caregiver and might lead to mounting stress and conflicts. The other significant correlate of neglect in our sample is the occurrence of resident-to-residence abuse in nursing homes. This abuse could have been of any type but occurred in the past 12 months. As far as we know, there are only two studies on resident-to-resident abuse in nursing homes (Lachs, Bachman, Williams, O'Leary, 2007; Shinoda-Tagawa, et al., 2004). According to a recent case-control study on Massachusetts nursing home residents, victims of resident-to-resident abuse were more likely to be "cognitively impaired, exhibit symptoms of wandering, be verbally abusive, and have socially inappropriate behavior than the controls" (Shinoda-Tagawa et. al., 2004, p. 591). It is possible that residents with these characteristics can be regarded as "troublemakers" because they can significantly increase the stress of their caregivers, and as a result, be denied opportunities for personal choice. Another possible explanation is that some nursing homes may be poorly managed: abuse is tolerated in the victim's environment such that both staff and nonstaff, who most likely are other residents, are able to behave in abusive way without consequences. As Lachs and his coauthors (2007) put it, "failure to protect one resident from the assaultive behavior of another could be construed as staff neglect if the behavior is repeated and not addressed" (p. 844).

In addition, individuals with behavior problems are at higher risk of being neglected than those who do not have behavior problems. Although the effect is marginally significant in our study ($p = 0.078$) partly due to our small sample size, we want to discuss it here because this finding is consistent with reports from surveys of nursing home staff, which found that staff who experienced conflicts with or aggression from patients were more likely to report having abused a patient in the past year (Pillemer & Moore, 1990). Taken together, these findings suggest that the combination of needing help with basic daily activities such as bathing and toileting and being verbally or physically aggressive toward the provider of such help may create a volatile situation that significantly increases the likelihood of the caregiver simply refusing to help the patient, resulting in neglect.

We were unable to confirm the most persistent and widespread finding to date in the domestic elder abuse literature, namely that cognitive impairment is a risk factor for abuse. This finding was probably due to our

ability to control for behavior problems when testing memory problems as a risk factor for neglect. Results from this sample suggest that neglect is more a consequence of behavior problems related to Alzheimer's disease and dementia and not of the individual medical conditions per se. These findings are consistent with the argument made by Lachs and Pillemer (1995) that the higher rate of abuse and neglect found among elders with Alzheimer's was due to aggressive and disruptive behavior precipitating abuse.

Other researchers have found that individuals who exhibited severe problematic behavior prior to institutionalization were less likely to experience visits from family members (Gaugler, Leitsch, Zarit, & Pearlin, 2000; Jervis, 2006). Previous research also suggested that individuals who received infrequent visits from their primary care representative are at greater risk for abuse and neglect (Menio, 1996). We are unable to find similar results in our study, but this would be a fruitful area for further research. On the contrary, social support indicators used in our study (which included visitations by family members, relationship quality between family members and their love ones in nursing homes, as well as monitoring by other friends and relatives) in general were not significantly associated with the risk of neglect.

The cause of elder neglect is multifactorial, and we recommend shaping future research, specifically research design and data collection, by focusing on the risk factors of institutional elder abuse and neglect from the perspective of an ecological framework that can help researchers fully understand the complex interactions among elders, family members, nursing home staff, and the environment that promote or deter neglect (Schiamberg et al., in press).

Practice and Policy Implications

"Neglect cases can be just as serious, if not more serious, than physical abuse cases" (Fulmer et al., 2005, p. 526). Our results indicated that elder neglect is a very serious problem in nursing homes. About 21% of family members reported that their loves ones were neglected at least once during the past 12 months, and this may very likely be an underestimate. Several suggestions for practice and policy follow from the findings. First, targeted educational programs on recognition and report of elder neglect should be implemented in nursing homes. The training programs should include the most common areas of neglect in nursing homes and the serious consequences of neglect such as the risks for bed sores, dehydration, malnutrition, contractures, and early mortality. Second, upon entering the nursing homes, residents should be carefully assessed in terms of their needs for ADLs, and the results, along with specific guidelines about proper handling of these residents with ADL limitations, should be made available to staff. More staffing and supervision are needed in units that deal with residents with multiple ADL limitations. In

addition, education of staff should include stages of dementia and how to deal with dementia residents with behavior problems. Third, nursing home staff should pay closer attention to those who were victims of resident-to-resident abuse, try to understand the circumstances of the abuse, and prevent such incidence from occurring. Finally, family members of nursing home residents also should be educated about the types of abuse and neglect in nursing homes perpetrated by both staff and nonstaff so that they can better monitor the well-being of their relatives.

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