Preventing Assaults by Nursing Home Residents: Nursing Assistants' Knowledge and Confidence–A Pilot Study

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Objective: To describe the frequency and context of assaults against nursing assistants (NAs) from residents and to describe NAs' beliefs about their violence prevention knowledge and self-efficacy to prevent assaults from residents.

Design: Survey.

Setting: Six nursing homes.

Participants: A total of 138 nursing assistants.

Measurements: NAs completed two investigator-developed surveys, the Demographic and Employment Questionnaire and the Knowledge and Self-Efficacy Survey. The Demographic and Employment Questionnaire included questions about race, gender, age, and education, current and previous employment, number of residents usually assigned, frequency of assaults, and training on workplace violence. On the Knowledge and Self-Efficacy Survey, the participants used a five-point Likert scale to rate their knowledge and confidence in recognizing and preventing assaults from residents.

Results: Assaults against nursing assistants from residents in nursing homes were common; 59% stated they were assaulted at least once a week and 16% stated they were assaulted daily. Fifty-one percent stated that they had been injured in their lifetime from an assault from a resident, and 38% of those injured received medical attention for an injury. On the Likert items, nursing assistants reported that they believed they had the most knowledge (mean = 3.76) and confidence (mean 3.81) in their ability to recognize when a resident is agitated or becoming aggressive. In comparison, NAs rated lower their knowledge (mean = 3.45) and confidence in their ability (3.50) to keep residents from becoming agitated or aggressive (mean 3.50). NAs rated lowest their knowledge (3.42) and confidence (mean = 3.47) in their ability to decrease residents' agitation and aggressiveness once they become agitated or aggressive.

Conclusions: These findings provide useful information that supports the need for violence prevention education and for developing violence prevention programs in nursing homes. **(J Am Med Dir Assoc 2002; 3: 366–370)**

Keywords: Assaults; violence prevention; nursing homes

Growing violence against healthcare workers prompted the Occupational Safety and Health Administration (OSHA) to publish guidelines in 1996 regarding the actions that employers must take to protect their employees from violence. The worker identified to be at greatest risk for nonfatal assault was the nursing assistant working in a long-term care facility.[1–3] The perpetrator of these assaults was most often the resident.

Violence research, and in particular research about nursing home violence, is in its infancy stage. In a study of 101 nursing homes, Winger, Schirm, and Stewart found that 84% of nursing home residents displayed behaviors that endangered staff.[4] In a study of 124 residents in four nursing homes, Ryden et al. found that 51% of aggressive behavior was physical, 48% verbal, and 4% sexual.[5] Two focus group studies describing nursing assistants (NAs) and their experiences with violence in nursing homes found that these workers often experienced harassment, threats, and assaults from patients.[6–7] These studies also found that the NAs believed that not only did they not receive adequate support from their supervisors related to

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Table 1. *Means, Ranges and Standard Deviations for Items on the Knowledge and Self-Efficacy Survey (N = 138)*

	Mean*	Range	Standard Deviation
Knowledge Scale (average of all items)	3.59	1.6–5.0	.75
How knowledgeable are you about			
Why residents become aggressive	3.76	1.0–5.0	.96
How to recognize when a resident is agitated or becoming aggressive	3.76	1.0–5.0	.96
How to keep residents from becoming agitated or aggressive	3.45	1.0–5.0	.91
How to decrease a resident's agitation or aggressive behavior	3.42	1.0–5.0	1.00
How to keep from getting assaulted by a resident	3.55	1.0–5.0	1.06

	Mean**	Range	Standard Deviation
Self-efficacy Scale (average of all items)	3.60	1.2–5.0	.75
How confident are you in your ability to			
Recognize when a resident is agitated or becoming aggressive	3.81	1.0–5.0	.99
Keep residents from becoming agitated or aggressive	3.50	1.0–5.0	.87
Decrease a resident's agitation or aggression	3.47	1.0–5.0	.87
Keep from getting assaulted	3.62	1.0–5.0	.94

* 1 = no knowledge; 5 = lot of knowledge.
** 1 = not at all confident; 5 = very confident.

violence but that their employers should make more efforts to protect them from violence.

Traditionally, workplace violence is not a term that is associated with residents in nursing homes and their aggressiveness toward caregivers. In fact, because many nursing home residents have dementia or other mind-altering disease processes, aggressive behavior toward staff is often not considered violent because there is no intent to harm. Yet, caregivers who experience emotional and physical injury from residents often perceive the assaults as violence, regardless of intent.[6]

Theoretical Framework

The framework used for the study is Bandura's Social Cognitive Theory (SCT). Self-Efficacy is a construct of SCT that often provides the framework for health promotion and health protection programs. Self-Efficacy refers to the confidence an individual experiences when performing certain tasks or behaviors. Bandura postulates that in order for a person to change or engage in a specific behavior she must believe that she is capable of performing the task. Individuals gain self-efficacy (confidence) in four ways: (1) performance of a task, (2) observing the performance of others, (3) verbal persuasion from others, and (4) emotional arousal.[8]

METHODS

We used a cross-sectional descriptive design with survey methodology to investigate NAs' knowledge and confidence to prevent assaults against nursing home residents. The data for this study were collected as part of a clinical trial that is testing the effectiveness of an intervention to enhance vio-

lence prevention skills and decrease the assaults against NAs working in nursing homes.

Settings and Subjects

Six nursing homes were randomly selected from a total of 43 in a large, metropolitan area in the Midwest to serve as sites for this study. All nursing assistants employed at the nursing homes who met the following criteria were asked to participate in the study: (a) 18 years of age or older, (b) working full-time, (c) providing caregiving activities daily, (d) not working for an outside employment agency, and (e) able to read English at the 6th-grade level.

Study Protocol

After reading and signing the consent form, each NA was asked to complete two investigator-developed surveys. The Demographic and Employment Questionnaire included four questions about race, gender, age, and education; five questions about current and previous employment; and eight questions about their experiences with workplace assaults and training on workplace violence. NAs were asked to state how many residents they were usually assigned during a workday. Assault was defined on the survey as including hitting, biting, throwing things, punching, pulling hair, spitting, and scratching. NAs were asked to rate on a scale from 1–6 the frequency of assaults by residents in their current job using the following descriptive ratings: less than once per month (1), once per month (2), every couple weeks (3), once a week (4), a couple times per week (5), and every day (6). NAs were asked to describe their frequency of reporting assaults to their supervi-

Table 2. *Percentages for Each Item on the Knowledge and Self-efficacy Survey (N = 138)*

Knowledge Scale	1 No Knowledge	2	3 Some Knowledge	4	5 A Lot of Knowledge
How knowledgeable are you about	N (%)	N (%)	N (%)	N (%)	N (%)
Why residents become aggressive	2 (1.4%)	3 (2.2%)	63 (45.7%)	28 (20.3%)	42 (30.4%)
Recognizing when a resident is agitated	1 (.7%)	7 (5.1%)	57 (41.3%)	32 (23.2%)	41 (29.7%)
How to keep residents from becoming agitated or aggressive	3 (2.2%)	11 (8.0%)	64 (46.4%)	40 (29.0%)	20 (14.5%)
How to decrease a resident's agitation or aggression	7 (5.1%)	9 (6.5%)	63 (45.7%)	37 (26.8%)	22 (15.9%)
How to keep from getting assaulted	6 (4.3%)	10 (7.2%)	56 (40.6%)	34 (24.6%)	32 (23.2%)

Self-efficacy Scale	1 Not at All	2	3 Somewhat Confident	4	5 Very Confident
How confident are you in your ability to	N (%)	N (%)	N (%)	N (%)	N (%)
Recognize when a resident is agitated or aggressive	3 (2.2%)	7 (5.1%)	43 (31.2%)	44 (31.9%)	41 (29.7%)
Keep residents from becoming agitated	2 (1.4%)	7 (5.1%)	71 (51.4%)	36 (26.1%)	22 (15.9%)
Decrease a resident's agitation or aggression	4 (2.9%)	6 (4.3%)	65 (47.1%)	46 (33.3%)	17 (12.3%)
Keep from being assaulted by residents	2 (1.4%)	9 (6.5%)	57 (41.3%)	41 (29.7%)	29 (21.0%)

sors categorized by the following responses: never, seldom, occasionally, often, always.

The Knowledge and Self-Efficacy Survey (Tables 1 and 2) was developed by the authors to gain baseline information as to how NAs perceive their beliefs about violence prevention with residents in their work setting. Since earlier focus group sessions with nursing home workers indicated that such violence was often expected, tolerated, and accepted,[6] we wanted to examine whether NAs acknowledged that they as caregivers had any control over the residents' behavior. The knowledge scale consisted of five Likert-type items and was used by the investigators to measure the subjects' beliefs about their knowledge to prevent aggression and assault by nursing home residents. The investigators used the four-item self-efficacy scale to measure the subjects' beliefs about their ability to prevent aggression and assaults. Coefficient alphas were 0.82 for both the Knowledge and Self-Efficacy Scales, with alphas for the individual items ranging from 0.75 to 0.83.

RESULTS

Demographic and Employment Survey

Of the eligible NAs in the six nursing homes, 63 percent (138 of 201) volunteered to participate and completed the Demographic and Employment Survey. The mean age of the subjects was 35.98 years (n = 137, range = 18–65, SD = 11.01). Table 3 highlights the demographics of the subjects and Table 4 highlights employment information. Eighty-three percent of the NAs reported that they were usually responsible for more than 10 residents each per shift, whereas the mean number of residents assigned per shift for each NA was 13.6. A large proportion of the residents in all six facilities had a diagnosis of dementia.

As reported by NAs in regard to their current job, physical assaults from residents are common (mean = 4.08; range 1–6). Fifty-nine percent stated they are assaulted at least once a week, and 16% stated they are assaulted daily. The mean frequency of assaults per nursing homes was reported as follows: 3.0, 3.61, 3.76, 3.8, 4.43, and 4.6 (mean = 3.86). Fifty-one percent stated that they had been injured by an assault from a resident during their lifetime, and 38% of those injured received medical attention for an injury. We were also interested to find that 10 percent (14 of 138) of subjects responded that a coworker had physically assaulted them during their lifetime while working as an NA, and 4.3% (6 of 138) responded that a family member had physically assaulted them. While the majority (56%) reported they *always* report

Table 3. *Demographic Characteristics of Subjects*

Characteristic	Percentage	Mean	SD
*Minority (n = 138)	71%	—	—
African-American (n = 138)	67%	—	—
Women (n = 138)	94%	—	—
Education (n = 138)	—	11.70 years	1.74
Age (n = 137)	—	35.98 years	11.01

* Minority included persons who stated they were of African-American, Asian or Hispanic race.

Table 4. *Employment Characteristics*

Duration of current employment (N = 131)	
Range 2 days–29 years	
≤ 1 month	7%
≤ 3 months	12%
≤ 6 months	25%
≤ 12 months	47%
≤ 2 years	60%
≤ 3 years	69%
≤ 5 years	74%
66% had worked as an NA at a previous nursing home (N = 134)	
23% left previous job as an NA for better pay (N = 128)	
12% left previous job as an NA due to a move (N = 128)	

NA, nursing assistant.

assaults to supervisors, 15% reported they *seldom* report assaults. Sixty-two percent of subjects reported they had received training to deal with aggressive residents, and 45% had received this type of training at their current work place.

Correlation analysis indicated that there was a significant negative relationship ($R = -.3$, $P < 0.001$) between the age of the nursing assistant and the frequency of assaults reported. As the age of the caregiver increased the incidence of assaults decreased. There was no significance between duration of employment as an NA and assaults, between training about aggressive residents and assaults, or between number of residents assigned and assaults.

Knowledge and Self-Efficacy Survey

The possible range of scores for each item on the Knowledge and Self-Efficacy Scales was 1–5. The means, ranges and standard deviations for the scales and individual items are shown in Table 3. Numbers and percentages of subjects as they rated their beliefs on the Likert-type items are reported in Table 4.

There was no significant correlation between self-efficacy and the usual frequency of assaults reported on the survey. There was a significant correlation ($R = 0.22$, $P < 0.05$) between knowledge and the frequency of assaults.

DISCUSSION

Assaults against caregivers were common, with many NAs stating that they are physically assaulted daily or weekly. The wide ranges of frequency of assaults for the individual NAs and for the six nursing homes were interesting findings, indicating that variables related to the caregivers and nursing homes are important to examine. Possible relationships between the NA's age, training and self-efficacy and assaults are described below. Other variables that are important for further study related to the NAs' characteristics include anger, stress levels, previous experience, skill level, and coping strategies. Examples of nursing home characteristics that need to be studied include the following: number and type of residents, organizational culture, management style and expertise, professional nurse:resident ratio, number and type of residents assigned to each caregiver, policies and procedures, and special units and organizational philosophies, such as an Alzheimer's unit or Eden alternative.

As the age of the caregiver increased, the number of assaults from residents decreased. Since duration of employment as an NA was not related to incidence of assaults, this finding does not appear to simply represent the difference between an experienced and novice NA. It is possible that older caregivers have a different approach when taking care of their residents. Their caregiving skills may be slower, more adaptable, or they may be more patient and empathetic in their approach with elderly patients. Further study should be conducted to examine the caregiving skills of older NAs to identify variables that directly influence the aggression cycle.

The means on the knowledge scale and self-efficacy scales (Table 1) were almost identical, 3.59 and 3.6 respectively. However, when looking at the means (Table 1) and the percentages (Table 2) on the individual items, differences and patterns are noted. NAs felt the most knowledgeable about "why residents become aggressive" and "how to recognize when a resident is agitated or becoming aggressive." Similarly, the NAs felt the most confidence in their ability to "recognize when a resident is agitated or becoming aggressive." The NAs felt the least knowledgeable about "how to keep residents from becoming agitated or aggressive" and "how to decrease a resident's agitation or aggressive behavior." Likewise, the NAs were the least confident in their ability to "keep residents from becoming agitated or aggressive" and "decrease a resident's agitation or aggressive behavior." However, the results indicate that many NAs had some confidence in their ability to control the resident's aggressive behavior through their caregiving skills. As stated earlier, Bandura's Social Cogntive Theory postulates that in order for a person to change or engage in a specific behavior he or she must believe that he or she is capable of performing the task. Violence prevention programs for NAs should reinforce the fact that assaults from residents are not an expected outcome of caregiving and that caregivers can influence aggressive behavior with residents in long-term care.

It is interesting to examine the results from the Knowledge and Self-Efficacy Survey in relation to the subjects' responses regarding their participation in prior training to prevent assaults from residents. Sixty-three percent responded that they had received training sometime while working as a NA in a nursing home, and 45% responded that they received training at their current facility. Yet, training was not related to the incidence of assaults. Violence prevention training in nursing homes is often not regarded as important as the training that is required for licensing and certification. Thus, when such training is offered, it is often minimal in length and scope. In a previous focus group study,[6] the NAs told us that the violence prevention training sessions are "too didactic and over their heads." They would like to have more opportunity to practice the skills they learn. The NAs also explained that the training focuses primarily on how to recognize a resident who is agitated or upset and environmental triggers that may increase a resident's agitation and aggressive behavior. It does not appear that NAs are given adequate opportunity to learn caregiving skills that keep residents from becoming agitated and decrease the resident's agitation or aggressive behavior once it occurs. These violence prevention skills require that NAs have an opportunity to practice strategies to handle a

variety of caregiving situations. Bandura's SCT (1977) used as the framework for this study supports the use of interactive learning techniques such as case studies or role-plays where people actually perform skills and observe others performing the skills.[8] These techniques allow NAs to use problem-solving methods that reenforce learning and lead to increased confidence in abilities. The differences in training methods may account for differences in knowledge and self-efficacy as reflected in the results of this study, emphasizing the need to test the effectiveness of NA training programs.

It is encouraging that many nursing assistants (56%) stated that they consistently report physical assaults to their supervisor. It is important that caregivers be encouraged to report assaults and that they not be reprimanded for the report or the assault. Caregivers and management alike realize that assaults from residents in nursing homes cannot be totally eliminated. However, they need to recognize that assaults are not to be tolerated and accepted.

The demographics of the subjects in this study are comparable to NAs in other nursing homes throughout the United States. NAs in nursing homes are often required to provide care in often extremely demanding situations. The work these employees perform is physically, emotionally, and psychologically demanding. In this study, NAs were caring for a large number of residents during a shift; the number of assigned residents for all three shifts ranged from 2 to 40 residents per nursing assistant. It was an unexpected finding that number of residents assigned was not related to frequency of assaults. The authors had expected that an increased workload would result in a hurried and rushed caregiving approach, which might lead to aggressive responses from residents. These findings are limited since they are based on self-report; more rigorous methods are needed to verify this finding.

The turnover rate for the subjects in this study is alarming; 47% of the NAs had been at their current job for less than 1 year. Turnover rates nationally in nursing homes range from 40 to 400%.[9] These turnover rates have serious implications for quality of care and economics. Because of the prevalence of dementia and other mind-altering diagnoses, many residents in nursing homes benefit from having a consistent caregiver. When a nursing assistant leaves a job, it takes a significant amount of time for a new nursing assistant to be able to provide the level of individualized care necessary for optimum health and well-being of residents. Experts believe that this lack of familiarity with residents can lead to increased patient frustration and subsequently, aggression. The turnover rate also has significant cost implications for the nursing home. It is estimated that it costs $7000 to replace a registered nurse and over $2200 to replace a nursing assistant.[10–11]

Of the NAs, 10 percent (14 of 138) stated that a coworker had physically assaulted them while working as an NA, and 4% (6 of 138) of the NAs reported a family member had assaulted them. These assault rates are astounding, especially when compared to other workers' experiences with coworker assaults. Analysis of survey data from 8000 women in the United States indicates that lifetime coworker victimization rates for women are about 1.1%, and annual victimization rate is 0.1%.[12] It appears that several forms of violence are occurring in nursing homes, as well as other US workplaces. Interventions to decrease coworker and customer (family) violence will involve different strategies than those used to decrease assaults from residents who frequently are nonintentional in their behavior.[13] However, it is imperative that all workplaces, including nursing homes, communicate to employees and customers that violence is not tolerated or accepted.

CONCLUSION

Although workplace violence is a concern for most workplaces today, the nursing assistant working in nursing homes experiences more physical assaults than any other worker. And while most of these assaults come from the residents, NAs may also experience physical assaults from coworkers and families. The work that NAs provide is physically, emotionally, and psychologically demanding, and the residents they care for are some of the most challenging in our healthcare system today. Many NAs working in nursing homes do not have sufficient knowledge and self-efficacy to prevent assaults from nursing home residents. Our study suggests that NAs are not adequately trained to prevent aggression and assaults. It is important to determine whether the violence experienced by nursing assistants working in nursing homes is related to the high turnover rate in this industry. Much more research is needed to examine how violence and other stressors are perceived by NAs and the effect that these variables have on productivity, accidents, injuries, absences, burnout and turnover. Intervention studies are also needed to test the effectiveness of programs to decrease the incidence of assaults.

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