Copyright 1992 by
The Gerontological Society of America

The Gerontologist
Vol. 32, No. 4, 493–497

This study describes the prevalence of violence and the putative risk factors for violence in 184 Alzheimer patients and their primary caregivers living in the community. Analysis of the severe violence subscale of the Conflict Tactics Scale indicated that 15.8% of patients had been violent in the year since diagnosis. A total of 5.4% of caregivers reported being violent toward the patient. The overall prevalence of violence was 17.4%. The variables most associated with violence were caregiver depression and living arrangement.

Key Words: Elder abuse, Dementia, Caregivers

Severe Family Violence and Alzheimer's Disease: Prevalence and Risk Factors[1]

Gregory J. Paveza, PhD,[2] Donna Cohen, PhD,[3] Carl Eisdorfer, PhD, MD,[4]
Sally Freels, PhD,[3] Todd Semla, PharmD,[5] J. Wesson Ashford, MD, PhD,[6]
Philip Gorelick, MD, MPH,[7] Robert Hirschman, PhD,[8]
Daniel Luchins, MD,[9] and Paul Levy, ScD[3]

Violence is emerging as a significant clinical challenge in families living with a relative diagnosed with Alzheimer's disease or a related dementia. It has been conceptualized and quantified differently in patients and caregivers with a focus on aggressive symptoms in dementia patients and abusive and neglectful behaviors in caregivers. Regardless of the perpetrator, when violent behaviors occur the health and well-being of the entire family are at risk.

Estimates are that 57–67% of dementia patients manifest some form of aggressive behavior, that is, verbal outbursts, physical threats, and/or violence (Ryden, 1988; Hamel et al., 1990; Reisberg et al., 1989). Because aggression has been measured as a broad category of symptoms, the prevalence of severe violence versus milder forms of threatening outbursts and behaviors in Alzheimer patients has not been extensively reported. Severe violence includes kicking, hitting, punching, biting, and threatening with or using a weapon.

Abuse of dementia patients by family caregivers — for example, physical abuse, financial abuse, or neglect — is reported to be common (Steinmetz, 1988; Hamel et al., 1990). Surveys of elder abuse have focused on a broad range of abusive behaviors in family members caring for physically and cognitively impaired relatives (Lau & Kosberg, 1979; Hickey & Douglas, 1981; Gioglio & Blakemore, 1983; Pillemer & Finkelhor, 1988; Anetzberger, 1987; Pillemer, 1986; Wolf, Strugnell, & Godkin, 1982; Chen et al., 1981; Pepper & Oakar, 1981; Steinmetz, 1988; Block & Sinnott, 1979). Although cognitive impairment in patients, often described as memory problems in these early studies, has been associated with a higher risk for caregiver abuse or violence (Lau & Kosberg, 1979; Pepper & Oakar, 1981; Anetzberger, 1987; Steinmetz, 1988), more research is needed to identify and clarify specific risk factors in this population (Ryden, 1988; Hamel et al., 1990). Prior aggression in the dementia patient, the premorbid relationship between the patient and caregiver, and frequent behavioral problems have been linked to aggression and violent behavior in patients (Ryden, 1988; Hamel et al., 1990).

Most research on patient aggression and caregiver abuse has treated these phenomena as independent phenomena in patients and caregivers. Steinmetz (1988) was among the first to suggest that abuse may be interactive, that is, related to the patient's verbal and physical abuse of a caregiver. The concept of a patient-caregiver dyad or family at risk of violence has been a useful model in family systems research and theory to study and intervene in family violence (Boszormenyi-Nagy & Spark, 1975; Minuchin et al., 1967; Figley, 1989) where violence can be either patient-directed, patient-generated, or mutual. However, this conceptual framework has not been applied to families caring for relatives with Alzheimer's disease, although living with a chronic illness like dementia is stressful and causes changes in family structure that could lead to violence.

This study uses a sample of Alzheimer patient-caregiver dyads selected from an Alzheimer's disease

---

[1] Funding for this research was provided in part by a grant to Dr. Cohen from the National Institute on Aging, Grant # 5U01-AG06777.

[2] Department of Veterans Affairs, Great Lakes HSR&D Field Program, P.O. Box 130170, Ann Arbor, MI 48113-0170; formerly School of Public Health, University of Illinois at Chicago.

[3] School of Public Health, University of Illinois at Chicago.

[4] Department of Psychiatry, School of Medicine, University of Miami.

[5] College of Pharmacy, University of Illinois at Chicago.

[6] Department of Psychiatry, University of California, Davis, and the V.A. Medical Center, Martinez, CA.

[7] Department of Neurology, Rush-Presbyterian-St. Lukes Medical Center, Chicago.

[8] Department of Psychiatry, University of Wisconsin-Milwaukee.

[9] Department of Psychiatry, University of Chicago Hospitals.

patient registry to achieve the following specific aims: (1) to describe the frequency of violent behavior in the patient/caregiver dyad, that is, caregiver violence toward patients as well as patient violence toward primary caregivers; and (2) identify putative risk factors for violent behavior in the patient-caregiver dyad. A better understanding of patient-caregiver interactions should facilitate the design of effective strategies for intervention and prevention of violence.

Method

Data Set

The 184 patient-caregiver dyads in this study were selected from an Alzheimer's disease patient registry known as the Prototype Alzheimer's Collaborative Team (PACT). PACT was established to study the feasibility and costs of establishing and operating a multisite registry for research in Alzheimer's disease and other dementias. Methods and procedures as well as a description of the total population have been reported elsewhere (Cohen et al., 1990a).

Briefly, PACT consists of a Data Coordinating and Analysis Center at the University of Illinois at Chicago that registered patients diagnosed at six medical sites: (1) the Memory and Disorders Clinic at Mount Sinai Hospital Medical Center, Miami Beach; (2) the Memory Disorders Clinic at the University of Miami, Jacksonville Memorial Hospital; (3) the Geriatrics Institute, University of Wisconsin-Milwaukee Clinical Campus; (4) the Regional Alzheimer's Disease Center, Southern Illinois University School of Medicine; (5) the Alzheimer's Disease Center, Michael Reese Hospital and Medical Center, Chicago; and (6) the University of Chicago School of Medicine Geriatrics Clinic.

PACT contains diagnostic, psychosocial, and sociodemographic information on a total of 1,402 cases. PACT cases had to be diagnosed between 1987 and 1989, 40 years and older, and living in the community at the time of diagnosis. Although the minimum criteria for dementia was a physician diagnosis with supporting documentation, most cases were diagnosed using DSM-III-R (American Psychiatric Association, 1987) or NINCDS-ADRDA (McKhann et al., 1984) criteria (two sites used both). About one-third of PACT cases were followed up 8 to 12 months after enrollment with a mailed questionnaire and a personal or phone interview with the primary caregiver. Of the 514 patient/caregiver dyads interviewed at follow-up, 184 met the two criteria used to select dyads for this analysis: patients had to be coded as meeting NINCDS-ADRDA or DSM-III-R criteria for Alzheimer's disease and have complete answers to the patient-caregiver violence questions in the interview.

Tests and Measures

A set of six patient and six caregiver variables were analyzed to identify the prevalence of violent behavior and the putative risk factors for violence in the patient-caregiver dyad. Patient variables from the case enrollment form were age, gender, current living arrangement, and mental and functional status at the time of diagnosis.

Although the PACT clinical centers used several mental status exams, only patients with Mini-Mental State Examination (MMSE) scores (Folstein, Folstein, & McHugh, 1975) documented on the case enrollment form were used. The MMSE has excellent test-retest reliabilities of 0.82 and higher and has been used extensively with dementia patients (Paveza et al., 1990; Folstein et al., 1991). The case enrollment form also included ratings of impairment on six activities of daily living (ADLs) — dressing, bathing, eating, walking, transferring, and toileting — at the time of diagnosis. Patients were rated on each of the ADLs as 1 = no trouble, 2 = a little trouble or difficulty, 3 = moderate difficulty, and 4 = unable to do ADL. Patients who scored 2 or greater on any ADL were considered impaired on that behavior. Impaired ADLs were totaled to provide an estimate of overall impairment, with patients dichotomized into those with fewer than two impairments and those with two or more impairments.

Caregiver variables from the interview were age, gender, race, kinship, a self-report measure of depression, and a self-report measure of life impairment due to psychiatric symptoms. The Center for Epidemiologic Studies — Depression Scale (CES-D; Radloff, 1977) has good reliability in general adult populations, older populations, and with family caregivers (Radloff, 1977; Radloff & Teri, 1986; Lawton et al., 1991). A cut-off of 16 (Radloff, 1977) was used to identify depressed caregivers. The 22-Item Screening Score of Psychiatric Impairment (Langer, 1963), developed for the Midtown Manhattan study, served as the general measure of psychiatric symptoms. This scale has item reliability coefficients ranging from 0.41 to 0.79. Caregivers were classified as symptomatic using a cut-off of four or greater.

The outcome measure, violence, was measured using the severe violence subscale of the Conflict Tactics Scale (CTS; Strauss, Gelles, & Steinmetz, 1980), which requests information on the occurrence of hitting, kicking, biting, and punching behaviors as well as information on the occurrence of threats with or use of a weapon on a person. This subscale was included in the follow-up interview with caregivers, using a modification developed by Finkelhor (1979) for use with adult subjects participating in self-report surveys. The CTS has been used extensively in research on family violence and elder abuse (Strauss & Gelles, 1986; Pillemer, 1986; Finkelhor & Pillemer, 1987) and has strong internal consistency with coefficient alphas of 0.82 and greater for the subscales; Finkelhor (1979) has shown that this level of internal consistency remains for his modification.

The modified severe violence subscale begins with an introductory statement indicating that sometimes behaviors such as hitting, kicking, biting, punching, and threatening with or using a weapon are ways some families deal with disagreements and conflict.

Through a series of six questions caregivers were specifically asked to identify whether severe violent behaviors had occurred between the patient and the caregiver, other family members, and non-family members in the year since diagnosis. Respondents were also asked to indicate the frequency of occurrence of these behaviors on an ordinal scale from 0 to 6 with each category representing a different frequency range of occurrence.

The seven ordinal responses were dichotomized to reflect no violence (0) or some violence (1–6). Thus, if either the patient or the caregiver were reported as violent, the dyad was labeled as violent, and if neither was violent the dyad was listed as nonviolent. Though it may have been possible to construct an ordinal violence variable for the dyad, assignment to any particular level would have required a complex set of decision rules and interpretability of such a variable would have been difficult.

Data Analysis

Prevalence estimates were calculated from positive responses to the severe violence questions from the CTS. Logistic regression was used to test potential risk factors for violent dyads. Parameter estimates can be converted to an estimate of the odds ratio, that is, the ratio of the odds that a dyad with a particular risk factor experienced violence when compared to a dyad without the risk factor.

A stepwise procedure was used to select a set of independently significant risk factors. All caregiver and patient variables were entered into the model simultaneously. Variables remained in the model if their individual significance level as a predictor of violence was less than or equal to 0.05, and if their significance level remained at less than or equal to 0.05 when tested against the other variables in the model.

Results

Table 1 provides demographic information on patients and caregivers. The mean age of patients was 74.6 years (± 8.0) with a male to female ratio of 1:2. Whites comprised 82.5% of the population, blacks comprised 9.3% of the population, and Hispanics and others 8.2%. A total of 20% of patients lived alone, and 50.6% of patients lived only with a spouse. The average age of caregivers was 63.4 years (± 14.7) with a male to female ratio of 1:2. Spouses comprised 47.8% of the caregivers, adult children 37.5%, sons-in-law and daughters-in-law 6.6%, and siblings and others 8.1%.

Overall, significant violence occurs in families living in the community with a relative who has Alzheimer's disease. As shown in Table 2, the general prevalence of violent caregiver-patient dyads was 17.4%. A total of 15.8% of patients were reported by caregivers to exhibit severe violent behavior toward caregivers in the year since diagnosis; 5.4% of the caregivers indicated that they were violent toward the patient. Mutual violence — patients toward caregivers and caregivers toward patients — was reported in 3.8% of the families.

The logistic regression identified two variables to be statistically associated with violent patient-caregiver dyads (Table 3). Patient-caregiver dyads where caregivers scored above the CES-D cutoff score of 16 were at 3 times greater risk for violence than caregivers who scored below the cutoff score. Patients living with family but without a spouse present were at almost 3 times greater risk for violence than patients in other living arrangements.

Table 1. Patient and Caregiver Demographics in 184 Alzheimer Families Reporting Violence

Variable	Patient (*n* = 184)	Caregiver (*n* = 184)
Age	74.6 (± 8.0)	63.4 (± 14.7)
Male to female ratio	1:2	1:2
Race (%)		
White	82.5	83.7
Black	9.3	9.8
Other	8.2	6.5
Marital status (%)[a]		
Single, never married	1.6	6.3
Married	56.8	75.0
Widowed	36.6	4.2
Divorced/separated	5.0	14.5
Caregiver relationship to patient (%)		
Spouse		47.8
Son		7.1
Daughter		30.4
Son-in-law		0.6
Daughter-in-law		6.0
Siblings		3.3
Other		4.8
Patient living arrangement (%)		
Alone	20.0	
With spouse only	50.6	
With spouse & other family	6.1	
Other family without spouse	18.3	
Others	5.0	

[a] For caregivers, this represents only those caregivers who are not spouses of the patients (*n* = 96)

Table 2. Prevalence and Severity of Patient and Caregiver Violence in Alzheimer Families

		Severity of violence in year since diagnosed (%)						
Type of violence	Prevalence (%)	Never	Once	Twice	3–5 times	6–10 times	11–20 times	20+ times
Patient to caregiver	15.8	84.2	4.3	2.7	3.3	1.1	1.1	3.3
Caregiver to patient	5.4	94.6	2.7	0.5	1.1	0.0	1.1	0.0
Patient & caregiver mutually violent	3.8							
Either patient or caregiver violent	17.4							

Table 3. Variables Associated as Risk Factors for Alzheimer Patient-Caregiver Dyad Violence as Determined by Stepwise Logistic Regression

Variable	Parameter estimate	Chi square	Odds ratio	95% C.I.	
				Upper	Lower
Intercept	−3.3752	24.2445***			
Caregiver depression	1.1393	7.3474**	3.12	7.12	1.37
Lives with family without spouse	1.0873	5.3906*	2.97	6.76	1.30

Note: −2 Log likelihood Chi square: 11.305 with 2 *df* ($p = 0.0035$). Association of predicted probabilities and observed responses: Concordant = 51.8%; Discordant = 18.5%; Tied = 29.7% (4433 pairs); Somers' D = 0.408; Gamma = 0.474; Tau-a = 0.098; c = 0.667.
*$p < .05$; **$p < .01$; ***$p < .0001$.

Discussion

Our results suggest that the occurrence of violent behaviors in families caring for a member with Alzheimer's disease is well in excess of prevalence figures of 1–3.9% stated in other studies of elder abuse (Block & Sinnott, 1979; Gioglio & Blakemore, 1983; Pillemer & Finkelhor, 1988). We cannot compare our findings directly to other studies on caregiver aggression toward Alzheimer patients (Ryden, 1988; Hamel et al., 1990) because our interviews focused on severe violence rather than the full range of possible abusive and aggressive behaviors. However, a comparison of our rates with estimates from the work of Pillemer and Finkelhor (1988) suggests that a person with Alzheimer's disease is 2.25 times at greater risk for a physically abusive episode than an older person living in the community. Furthermore, if violence to persons over age 60 were the only consideration, regardless of role (i.e., caregiver or patient), the estimated risk for violence would increase substantially relative to other community-dwelling families. Thus, families caring for relatives with Alzheimer's disease in the community are particularly vulnerable to episodes of violent behavior.

Although other researchers (Ryden, 1988; Hamel et al., 1990) reported the frequent occurrence of a range of aggressive behaviors in Alzheimer patients, they do not separate severe patient violence from milder outbursts. Our findings suggest that severe violence expressed toward a family caregiver is not rare. Given this intensity of patient aggression, it is understandable that some violent caregivers describe a mutually violent relationship with the patient. Steinmetz (1988) also reported that some violent behaviors in caregivers may be the result of interactions with an older person who is potentially as abusive as the caregiver. Although abusive behavior by the dependent aged person cannot justify the response of the caregiver, the development of primary prevention strategies requires a better understanding of both patient and caregiver behaviors.

Results of the logistic regression indicate that patient attributes were not good predictors of risk for violence in Alzheimer families. Neither cognitive nor functional impairment emerged as predictive risk factors, in contrast to results of one previous study (Ryden, 1988). Our work also challenges findings from elder abuse surveys suggesting that both cognitive and functional impairment are factors for potential abuse (Block & Sinnott, 1979; McLaughlin, Nickell, & Gill, 1980; Anetzberger, 1987; Steinmetz, 1988), but our findings support the recent work of Finkelhor and Pillemer (1987) and Homer and Gilleard (1990), which suggests that patient physical dependence is not a significant risk factor for abusive interactions between caregivers and patients.

However, two important variables were associated with violence in the patient-caregiver dyad: caregiver depression and a living arrangement in which the patient is residing with immediate family but without a spouse. While several studies (Lau & Kosberg, 1979; Block & Sinnott, 1979; Pillemer, 1986; Anetzberger, 1987; Wolf, Strugnell, & Godkin, 1982) have linked caregiver emotional problems to the risk for elder abuse, depression as a specific risk factor has been only equivocally linked to risk for elder abuse in studies derived from case reports (Lau & Kosberg, 1979; Anetzberger, 1987). However, Homer and Gilleard (1990) recently noted significant levels of depression in abusive caregivers of demented and stroke patients. Our findings similarly suggest that depression, particularly depression that is at near-clinical levels as measured on the CES-D, may be a significant risk factor for severe abuse in Alzheimer families. Several studies have documented that significant numbers of Alzheimer caregivers develop symptoms of depression and as many as half meet criteria for clinical depression (Cohen et al., 1990b; Haley et al., 1987; Anthony-Bergstone, Zarit, & Gatz, 1988; Gallagher et al., 1990). Careful probing for evidence of patient abuse is merited when caregivers appear clinically depressed.

The finding on living arrangement is supported by much of the previous work on elder abuse derived from case reports, in which adult child caregivers seem to be at greatest risk for abusing and neglecting the patient (Lau & Kosberg, 1979; Block & Sinnott, 1979; Anetzberger, 1987). Caregiving may be particularly burdensome for adult children when the patient is residing with family where the long-term bond of a marriage is missing. This sense of being caught in the middle, as described by Brody (1985), appears to result in an increased risk for violence in the family. This finding suggests that adult child caregivers should be encouraged to participate in and utilize those services that provide support with the caregiving endeavor.

There is probably a response bias in our caregiver answers, because caregivers may not have been entirely truthful. However, the reporting error would have resulted in underestimates of both caregiver and patient violence. It is likely that the levels of violence are greater than we observed.

Another potential consequence of underreporting would be the failure to identify all possible risk factors. Future research should increase sample size and use in-person interviews of both caregivers and patients where possible. These case-control studies should be followed by longitudinal studies to confirm the risk factors for abuse and violence and to better establish both incidence and prevalence rates.

Besides identifying behaviors and attitudes that place families at risk for violence, longitudinal studies also can determine the effects of violence on family life. They can help determine what happens to patients and caregivers during the illness and whether these outcomes are different for families where violence is present when compared with nonviolent families. This research can assist program planners and policymakers to work toward the development of targeted prevention and intervention strategies to improve the quality of life for both patients and their caregivers.

References

American Psychiatric Association. (1987). *Diagnostic and statistical manual, 3rd edition, revised.* Washington, DC: Author.

Anetzberger, G. J. (1987). *The etiology of elder abuse by adult offspring.* Springfield, IL: Charles C Thomas.

Anthony-Bergstone, C. R., Zarit, S. H., & Gatz, M. (1988). Symptoms of psychological distress among caregivers of dementia patients. *Psychology and Aging, 3,* 245–248.

Block, M., & Sinnott, J. (1979). *The battered elder syndrome.* Unpublished manuscript.

Boszormenyi-Nagy, I., & Spark, G. (1975). *Invisible loyalties.* New York: Harper & Row.

Brody, E. (1985). Parent care as normative family stress. *The Gerontologist, 25,* 19–29.

Chen, P. N., Bell, S., Dolinsky, D., Doyle, J., & Dunn, M. (1981). Elder abuse in domestic settings: A pilot study. *Journal of Gerontological Social Work, 4,* 3–17.

Cohen, D., Paveza, G., Levy, P. S., Ashford, J. W., Brody, J. A., Eisdorfer, C., Gorelick, P., Hirschman, R., Luchins, D., Trozzolo, T., & Shaw, H. (1990a). An Alzheimer's disease patient registry: The prototype Alzheimer collaborative team (PACT). *Aging, 2,* 312–316.

Cohen, D., Luchins, D., Eisdorfer, C., Paveza, G., Ashford, J. W., Gorelick, P., Hirschman, R., Freels, S., Levy, P., Semla, T., & Shaw, H. (1990b). Caring for relatives with Alzheimer's disease: The mental health risks to spouses, adult children and other family caregivers. *Behavior, Health and Aging, 1,* 171–182.

Figley, C. R. (Ed.). (1989). *Treating stress in families.* New York: Brunner/Mazel.

Finkelhor, D. (1979). *Sexually victimized children.* New York: The Free Press.

Finkelhor, D., & Pillemer, K. (1987). *Correlates of elder abuse: A case-control study.* Unpublished manuscript.

Folstein, M.F., Bassett, S. S., Anthony, J. C., Romanoski, A. J., & Nestadt, G. R. (1991). Dementia: Case ascertainment in a community setting. *Journal of Gerontology, 46,* M132–M138.

Folstein, M. F., Folstein, S. E., & McHugh, P. R. (1975). "Mini-mental state": A practical method for grading the cognitive state of patients for the clinician. *Journal of Psychiatric Research, 12,* 189–198.

Gallagher, D., Wrabetz, A., Lovett, S., Del Maestro, S., & Rose, J. (1990). Depression and other negative affects in family caregivers. In E. Light & B. D. Lebowitz (Eds.), *Alzheimer's disease treatment and family stress: Directions for research* (pp. 218–244). New York: Hemisphere.

Gioglio, G., & Blakemore, P. (1983). *Elder abuse in New Jersey: The knowledge and experience of abuse among older New Jerseyans.* Unpublished manuscript.

Haley, W. E., Levin, E. G., Brown, S. L., Berry, J. W., & Hughes, G. H. (1987). Psychological, social, and health consequences of caring for a relative with senile dementia. *Journal of the American Geriatrics Society, 35,* 405–411.

Hamel, M., Gold, D. P., Andres, D., Reis, M., Dastoor, D., Grauer, H., & Bergman, H. (1990). Predictors and consequences of aggressive behavior by community-based dementia patients. *The Gerontologist, 30,* 206–211.

Hickey, T., & Douglas, R. (1981). Neglect and abuse of older family members: Professionals' perspectives and case experiences. *The Gerontologist, 21,* 171–183.

Homer, A. C., & Gilleard, C. (1990). Abuse of elderly people by their carers. *British Medical Journal, 301,* 1359–1362.

Langer, T. S. (1963). A twenty-two item screening score of psychiatric symptoms indicating impairment. *Journal of Health & Human Behavior, 12,* 269–276.

Lau, E., & Kosberg, J. (1979). Abuse of the elderly by informal care providers. *Aging, September-October,* 10–15.

Lawton, M. P., Moss, M., Kleban, M. H., Glicksman, A., & Rovine, M. (1991). A two-factor model of caregiving appraisal and psychological well-being. *Journal of Gerontology, 46,* P181–P189.

McKhann, G., Drachman, D., Folstein, M., Katzman, R., Price, D., & Stadlan, E. M. (1984). Clinical diagnosis of Alzheimer's disease: Report of the NINCDS-ADRDA work group under the auspices of Department of Health and Human Services task force on Alzheimer's disease. *Neurology, 34,* 939–944.

McLaughlin, J. S., Nickell, J. P., & Gill, L. (1980). An epidemiological investigation of elderly abuse in southern Maine and New Hampshire. In *Elder abuse* (Pub. No. 68–463, U.S. House of Representatives, Select Committee on Aging). Washington, DC: U.S. Government Printing Office.

Minuchin, S., Montalvo, B., Guerney, B. G., Rosman, B. L., & Schumer, F. (1967). *Families of the slums.* New York: Basic Books.

Paveza, G. J., Cohen, D., Blaser, C. J., & Hagopian, M. (1990). A brief form of the mini-mental state examination for use in community care settings. *Behavior, Health & Aging, 1,* 133–139.

Pepper, C., & Oakar, M. R. (1981). *Elder abuse: An estimation of a hidden problem* (Pub. No 97-277, U.S. House of Representatives, Select Committee on Aging). Washington, DC: U.S. Government Printing Office.

Pillemer, K. A. (1986). Risk factors in elder abuse: Results from a case-control study. In K. A. Pillemer & R. S. Wolf (Eds.), *Elder abuse: Conflict in the family* (pp. 239–263). Dover, MA: Auburn House.

Pillemer, K., & Finkelhor, D. (1988). The prevalence of elder abuse: A random sample survey. *The Gerontologist, 28,* 51–57.

Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1,* 385–401.

Radloff, L. S., & Teri, L. (1986). Use of the Center for Epidemiological Studies-Depression scale with older adults. *Clinical Gerontologist, 5,* 119–135.

Reisberg, B., Franssen, E., Sclan, S. G., Kluger, A., & Ferris, S. H. (1989). Stage specific incidence of potentially remediable behavioral symptoms in aging and Alzheimer's disease: A story of 120 patients using the BEHAVE - AD. *Bulletin of Clinical Neurosciences, 54,* 95–112.

Ryden, M. (1988). Aggressive behavior in persons with dementia living in the community. *The Alzheimer Disease and Associated Disorder International Journal, 2,* 342–355.

Steinmetz, S. K. (1988). *Duty bound: Elder abuse and family care.* Newbury Park, CA: Sage.

Straus, M. A., & Gelles, R. J. (1986). Societal change and change in family violence from 1975 to 1985 as revealed by two national surveys. *Journal of Marriage and Family, 48,* 465–479.

Straus, M. A., Gelles, R. J., & Steinmetz, S. K. (1980). *Behind closed doors: Violence in the American family.* Garden City, NY: Anchor.

Wolf, R. S., Strugnell, C. P., & Godkin, M.A. (1982). *Preliminary findings from three model projects on elderly abuse.* Worcester, MA: University of Massachusetts Medical Center, Center on Aging.