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Using Latent Class Analysis to Identify Profiles of Elder Abuse Perpetrators

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Abstract

Objectives: Research suggests that abuser risk factors differ across elder mistreatment types, but abuse interventions are not individualized. To move away from assumptions of perpetrator homogeneity and to inform intervention approaches, this study classifies abusers into subtypes according to their behavior profiles.

Method: Data are from the Older Adult Mistreatment Assessment administered to victims by Adult Protective Service (APS) in Illinois. Latent class analysis was used to categorize abusers ($N = 336$) using victim and caseworker reports on abusers' harmful and supportive behaviors and characteristics. Multinomial logistic regression was then used to determine which abuser profiles are associated with 4 types of mistreatment—neglect, physical, emotional, and financial—and other sociodemographic characteristics.

Results: Abusers fall into 4 profiles descriptively labeled "*Caregiver*," "*Temperamental*," "*Dependent Caregiver*," and "*Dangerous*." *Dangerous* abusers have the highest levels of aggression, financial dependency, substance abuse, and irresponsibility. *Caregivers* are lowest in harmful characteristics and highest in providing emotional and instrumental support to victims. The 4 profiles significantly differ in the average age and gender of the abuser, the relationship to victims, and types of mistreatment committed.

Discussion: This is the first quantitative study to identify and characterize abuser subtypes. Tailored interventions are needed to reduce problem behaviors and enhance strengths specific to each abuser profile.

Keywords: Abuse intervention—Abuser—Elder mistreatment—Stress and burden—Typology

Elder mistreatment—neglect, financial exploitation, physical, psychological, and sexual abuse—is a growing problem in aging societies, yet there is little consensus on what interventions best serve the needs of victims and society (see Moore & Browne, 2016 for a review of interventions). The field has made significant progress in identifying victim risk factors but comparatively little progress in identifying how abusers differ across types of elder mistreatment. This is despite research showing that abuser characteristics are stronger predictors of mistreatment than victim characteristics (e.g., Conrad, Liu, Beach, & Iris, in press; Jackson & Hafemeister, 2011; Pillemer & Finkelhor, 1989), and that abusers vary in their relationship to the victim, motivation, and culpability (Jackson, 2014).

The disproportionate focus on victims compared to abusers is driven by two factors. First, the elder abuse field is based on a social work and child protective services model, designed to support and protect victims

(Anetzberger, 1987; Wolf, 2003), rather than a criminal justice model that focuses on prosecuting abusers (Jackson, 2016). Adult Protective Service (APS) caseworkers receive little training on how to interview abusers and assist them with issues like substance abuse, unemployment, and mental health problems. Second, collecting information from abusers who deny allegations and refuse to be interviewed is difficult. There is also the challenge of obtaining reliable information about abusers from their victims who may be fearful of reprisal, cognitively impaired, or wish to protect the abuser from negative consequences (Enguidanos, DeLiema, Aguilar, Lambrinos, & Wilber, 2014; Lachs & Pillemer, 1995; Zink, Fisher, Regan, & Pabst, 2005).

Using data from the Older Adult Mistreatment Assessment (OAMA), the purpose of this study was to move beyond the one-dimensional view of abusers described in early literature by identifying distinct abuser profiles. The OAMA was administered by APS workers in Illinois following reports of mistreatment of older adults 60+ living in the community (Conrad, 2015). All cases in the study sample were substantiated, which in Illinois means that after investigating the reported allegations, the caseworker determined that there was sufficient reason to believe abuse, neglect, and/or financial exploitation occurred (Illinois Department of Aging, 2013).

We tested whether abusers can be classified into distinct subtypes that vary according to their traits and behaviors, and whether specific abuser profiles are associated with different types of mistreatment. This study will enhance the field by moving away from a one-size-fits-all approach toward more targeted services that reduce the risks associated with specific abuser profiles.

Background and Significance

Theories on Abusers

The *caregiver stress and burden* theory was the predominant explanation for elder mistreatment in the early 1980s (Steinmetz, 1978, 1988). This situational perspective is rooted in the child abuse literature and proposes that as people age they become more frail and dependent on others. Overwhelmed caregivers may respond to these needs by intentionally or unintentionally harming older adults or by failing to provide care (Steinmetz, 1978, 1988).

Empirical evidence has largely discredited the caregiver stress and burden theory as the primary cause of elder mistreatment because it places too much responsibility for mistreatment on victims while ignoring the role of abusers (Bristowe & Collins, 1988; Pillemer, 1985; Suitor & Pillemer, 1988). Studies in the late 1980s found that older adults receiving care from abusive caregivers were not necessarily more impaired or dependent than those with non-abusive caregivers (Bristowe & Collins, 1988; Pillemer, 1985; Suitor & Pillemer, 1988). Nevertheless, the dynamics of caregiving do provide a context for victim–abuser interactions that may result in high levels of interpersonal conflict (Anetzberger, 2000).

Pillemer and Finkelhor (1989) tested the caregiver stress and burden theory and found that abuse outcomes are better predicted by problems associated with the abuser than by the functional status and dependency of the older adult. They found that the abuser's personality, psychological status, and financial well-being were highly associated with elder mistreatment, and that abusers tended to rely more on victims for housing and financial support than the reverse relationship of dependency.

There is a growing body of research supporting the role of abuser problem behaviors as the primary cause of elder mistreatment. Anetzberger, Korbin, and Austin (1994) conducted a case–control study and found that abusers were more likely than non-abusers to drink, become intoxicated, and have alcohol abuse problems. Abusive behaviors are also associated with unemployment and social isolation (Amstadter et al., 2011; Lowenstein, Eisikovits, Band-Winterstein, & Enosh, 2009; Manthorpe et al., 2007). Studies have also reported a high prevalence of mental illness among abusers (e.g., Brownell, Berman, & Salamone, 2000).

Together, this research suggests that to protect victims we must focus on those responsible. The implementation of abuser- or dyad-centered interventions may improve outcomes by specifically addressing abuser problem behaviors that contribute to harmful actions, recognizing that successful abuse interventions address both parties involved. The first step to developing these interventions is categorizing the target users and identifying their behavior profiles.

Variability Among Abusers

Elder mistreatment encompasses many forms. Whereas some abuse involves intentional acts in which a perpetrator physically, sexually, psychologically, or financially harms an older person, elder neglect involves the omission of care by the person(s) responsible to protect the elder from harm (Hall, Karch, & Crosby, 2016). Given the diversity of elder mistreatment, it is no surprise that abuser risk factors differ by type of mistreatment. Brownell, Berman, and Salamone (2000) found that impaired abusers are more likely than unimpaired abusers to engage in physical abuse and psychological abuse, and Acierno and colleagues (2009) reported that abuser history of mental illness is more strongly associated with physical abuse than emotional abuse. Jackson and Hafemeister (2011) found that poor abuser health was associated with *hybrid* financial abuse—that is, financial exploitation with a combination of physical abuse and/or caregiver neglect. In a recent review, Jackson and Hafemeister (2016) reported that even within a particular type of elder mistreatment—caregiver neglect—perpetrators fall into two distinct groups that exhibit different characteristics, interpersonal dynamics, and risk factors.

Due to methodological challenges associated with recruiting and collecting data from victims and their

abusers, early studies on elder mistreatment risk factors tended to treat elder abuse as a monolithic phenomenon. Over time, it has become increasingly clear that elder mistreatment is an overarching term describing a constellation of unique, though potentially co-occurring issues influenced by both individual and contextual issues (Mosqueda et al., 2016; Pillemer, Burnes, Riffin, & Lachs, 2016). While risk factors are often treated as orthogonal variables that are uncorrelated (Jackson & Hafemeister, 2013), key characteristics and behaviors—such as substance abuse and financial dependency—are strongly associated (Bonnie & Wallace, 2003). More studies are needed to examine how specific traits relate to one another and whether they are unique to some mistreatment types but not others.

Conceptual Framework: Abuser Typologies

This paper is guided by the conceptual framework outlined in existing abuser typologies and the methods used by researchers who study intimate partner violence (IPV). They used cluster analysis techniques to create typologies of male batterers (Chiffriller, Hennessy, & Zappone, 2006; Holtzworth-Munroe, Meehan, Herron, Rehman, & Stuart, 2000; Holtzworth-Munroe & Stuart, 1994; Saunders, 1992). Similar methods have not yet been applied to elder abuse. To date, only three publications describe a proposed typology of those who mistreat older adults, and one of them (Tueth, 2000) focuses solely on financial abuse. Based on a review of the literature, Tueth (2000) described two subtypes of financial abusers: (a) *Passive/opportunistic* exploiters are dysfunctional, psychosocially stressed individuals with low self-esteem and substance abuse problems; and (b) *Active/predatory* exploiters actively seek vulnerable older adults to manipulate using threats and intimidation.

Jackson (2014) outlines a four-class typology of abusers that fall within a continuum of malicious intent: (a) *Ignorant*—mistreatment (usually neglect) occurs because the abuser is unable to perform caregiving duties; (b) *Reluctant Exploiters*—mistreatment arises from caregiver stress or other non-malicious motives; (c) *Ready Exploiters*—abuse is unplanned but the abuser takes advantage of an opportune moment; and (d) *Bad Actors*—abuse is premeditated and deliberate.

A similar five-class typology was proposed by Ramsey-Klawsnik (2000) based on clinical experience evaluating victims and abusers: (a) *Overwhelmed*—abusers are well-intentioned and qualified to provide care but feel stressed, resulting in harm to the older adult; (b) *Impaired*—abusers are not qualified to provide care due to frailty, developmental delay, physical impairment, mental illness, and/or substance dependence that often leads to psychological abuse, physical abuse, and/or neglect; (c) *Narcissistic*—abusers are motivated by personal gain and seek easy targets to exploit; (d) *Domineering/bullying*—abusers are ego-driven and feel justified in the use of coercive force to control their victims. They engage in physical, psychological, and sexual abuse; and (e) *Sadistic*—abusers derive pleasure from inflicting

harm and typically exhibit sociopathic personality disorders, leaving them free of guilt, shame, and remorse.

Both Jackson (2014) and Ramsey-Klawsnik (2000) acknowledge that some abusers are well-intentioned and exhibit helpful behaviors despite ultimately engaging in abuse or neglect. Research is needed to better understand abuser strengths in addition to weaknesses to inform interventions that bolster these positive traits through caregiver support, training, and education.

Creating an Abuser Classification

Existing typologies have laid the groundwork for a classification scheme but have not been validated using quantitative methods. Drawing on data from APS assessments, the present study uses latent class analysis (LCA) to categorize abusers into subtypes. LCA is similar to cluster analysis and uses observed data to group individuals into latent classes based on their shared characteristics and behaviors. It does not rely on assumptions of linearity or normal distribution that are often violated in regression analysis, leading to biased interpretations of the parameter estimates (Magidson & Vermunt, 2004). We selected this approach because we believe that some abuse interventions will be better suited to one abuser subtype over another, and the first step to developing successful interventions is to classify the target users into groups.

Similar to Jackson's (2014) and Ramsey-Klawsnik's (2000) typologies, we predict that abuser profiles will exist on a continuum of malicious characteristics, with some subtypes scoring high in negative traits and behaviors (e.g., history of trouble with the law, being irresponsible, having alcohol problems), and others scoring low on those behaviors and high in positive behaviors (e.g., providing care and support to the victim). We hypothesize that abusers classified as higher on the continuum of malicious characteristics will have perpetrated more substantiated abuse types (polyvictimization) than abusers lower on the continuum.

Method

Sample and Measures

Data are derived from the OAMA, developed as part of the Elder Abuse Decision Support System (EADSS), a validated risk assessment tool used to substantiate reports of abuse and neglect of vulnerable adults (ages 60+) in the community. It includes data collected at case intake, data from interviews with the alleged victim and the alleged abuser, and observations and abuse substantiation assessments made by caseworkers. The OAMA covers neglect, physical, sexual, emotional, and financial abuse, but not self-neglect. Information on the development and validation of the EADSS is available in Conrad, Iris, Riley, Mensah, and Mazza (2013). Measures can be found at www.eadss.org.

Six APS agencies in Chicago began using the OAMA in their abuse investigations between November 2012 and June 2013. While there is great variability across the United States (Jirik & Sanders, 2014), Illinois's APS program is

similar to programs in many other states. To qualify for services, an alleged victim must live in the community and be aged 60 or older. The alleged abuser must have a relationship with the older adult involving an expectation of trust (not a stranger).

The present analysis is limited to cases where a substantiation decision was made after a 30-day investigation period, where "yes" = evidence was found to substantiate abuse and/or neglect, and "no" = no evidence found to substantiate the allegations. Reasons for allegations not being investigated or substantiated were: victim refused, access denied, unable to locate victim, victim deceased, no jurisdiction, victim moved, victim institutionalized, victim judged no longer at risk, and case transferred.

There were 948 total cases investigated during the enrollment period (61.6% of 1,539 total reports), and 591 cases where at least one type of allegation was positively substantiated by APS (62.3% of 948 investigated reports). Of those cases, 336 cases had data on the abuser (35.4% out of 948 total investigated cases). Of the cases excluded, 357 (37.7%) had no mistreatment substantiated and 255 (26.9%) lacked the abuser data needed for the analysis.

During case investigation, alleged victims were asked to report on the alleged abuser's negative/harmful behaviors and characteristics (30 items), and positive/helpful behaviors (7 items). Questions include whether the abuser has a history of trouble with the law, depends on the victim for money, provides emotional support, and other behaviors. Response options are 0 = "No," 1 = "Some indication," and 2 = "Yes." Responses were dichotomized to 0 = "no" and 1 = "yes/some indication." Information on the abuser's age, sex, and relationship to the victim was collected by the caseworker or extracted from the case intake form.

Nine abuser items were selected for the LCA model that met the following criteria: (a) described in previous research as known risk factors for elder mistreatment (e.g., Conrad et al., in press; Pillemer et al., 2016); (b)

were highly correlated with substantiated mistreatment outcomes; and (c) had high frequency of endorsement: 25%–50% of the sample reported "yes" or "some indication." If two highly endorsed items were collinear ($r > .7$), the highest frequency item was selected for the LCA model to reduce model complexity and maximize parsimony. Table 1 lists these nine items and how often each was endorsed. If the alleged victim was unable to respond to questions about the abuser, the caseworker completed the assessment using observation and third-party/collateral reports (78%, $n = 268$).

Latent Class Analysis

We used *SAS v9.4* to identify the number of distinct abuser subtypes (classes, k), the relative size of each subtype (proportion of abusers within each class, γ), and the distribution of characteristics within each subtype (probability of each of the nine items based on class membership, ρ).

Using stepwise addition, $k + 1$ classes were added until the best solution for the data was reached (Lanza & Rhoades, 2013). The optimal value of k was determined based on an assessment of which model offered the most parsimonious grouping of individuals into subtypes and four indicators of model fit: the Akaike Information Criterion (AIC), the Bayesian Information Criterion (BIC), entropy, and the Likelihood Ratio Statistic (G^2). Lower AIC, BIC, and G^2 values are preferred. Entropy is a measure from zero to one of how well individuals are assigned to latent classes (class differentiation), with values closer to 1 indicating better differentiation. The bootstrap likelihood ratio test (BLRT) assesses the relative improvement in fit between two nested models: a model with k classes versus a smaller model with $k − 1$ classes. The optimal class solution has high entropy, low AIC and BIC values, and a G^2 value that is significantly smaller than the G^2 value of the $k − 1$ model based on the BLRT results. As important, the characteristics of abusers

Table 1. Items Used to Differentiate Abusers in Latent Classes ($N = 336$)

	Missing N (%)	Yes or some indication N (%)
Negative abuser characteristics and behaviors		
History of trouble with the law	72 (21.4)	86 (25.6)
Trouble keeping a job	84 (25.0)	93 (27.7)
Emotionally draining/wears victim out	37 (11.0)	168 (50.0)
Seems irresponsible	54 (16.1)	114 (33.9)
Depends on victim for money	37 (11.0)	135 (40.2)
Has a drinking/alcohol problem	71 (21.1)	71 (40.2)
Problems controlling temper	44 (13.1)	141 (42.0)
Positive abuser characteristics and behaviors		
Takes care of victim's personal needs well enough (e.g., cooking, feeding, doctor's appointments, errands)	43 (12.8)	169 (50.3)
Provides emotional support (e.g., listens to and talks to victim)	33 (9.8)	141 (42.0)

within each class should be distinct from the characteristics of abusers assigned to other classes. In other words, the subtypes must be qualitatively different and theoretically plausible.

Results

Sample Characteristics

Abuser and victim characteristics are presented in Table 2. The majority of victims (68.5%) and abusers (56.2%) were female. Mean abuser age was 50.1 (*SD* = 17.0) and mean victim age was 76.5 (*SD* = 9.7). Approximately half the victims were non-Hispanic White, 35.7% Black, and 14.9% Hispanic. More than half the abusers were children, 15.6% spouses/partners, 16.7% other relatives (e.g., grandchild, niece, sibling), 7.1% friends, 5.7% paid caregivers, and 1.5% service professionals (e.g., realtor, contractor, landscaper, financial planner). Forty-eight percent of cases involved substantiated emotional abuse, 51.5% financial exploitation, 35.1% neglect, 21.1% physical

Table 2. Sample Characteristics (*N* = 336)

	Mean (*SD*)/*N* (%)
Abuser characteristics	
Abuser age (range: 13–96 years)	50.1 (17.0)
Abuser gender (female)	189 (56.2)
Victim characteristics	
Victim age (range: 60–97 years)	76.5 (9.7)
Victim gender (female)	230 (68.5)
Race/ethnicity	
Non-Hispanic White	164 (48.8)
Black	120 (35.7)
Hispanic	30 (14.9)
Other	5 (1.5)
Abuser's relationship to victim	
Type of relationship	
Child	175 (52.1)
Spouse/partner	52 (15.6)
Other relative	56 (16.7)
Friend	24 (7.1)
Paid caregiver	19 (5.7)
Service professional	5 (1.5)
Abuser is victim's caregiver	147 (43.8)
Abuser is representative payee	25 (7.4)
Abuser is power of attorney	24 (7.1)
Substantiated abuse types	
Neglect	118 (35.1)
Financial exploitation	173 (51.5)
Emotional abuse	162 (48.2)
Physical abuse	71 (21.1)
Sexual abuse	7 (1.6)
Total abuse types per case (range: 1–5)	1.6 (0.7)

Note: Analysis sample includes only substantiated abuse cases where data are available on the alleged abuser. Two cases were missing race/ethnicity, and five were missing relationship type.

abuse, and 1.7% sexual abuse. Polyvictimization, defined as co-occurring or sequential types of elder abuse by one or more perpetrators (Ramsey-Klawsnik & Heisler, 2014), was very common. More than one type of abuse was substantiated in 41% of cases, with an average of 2.3 types of mistreatment per polyvictimization case. Financial exploitation and emotional abuse had the highest frequency of co-occurrence—30% of cases, followed by emotional and physical abuse—19.5% of cases.

Abuser Typologies

Model selection

The four- and five-class solutions were the best candidates for classifying abusers. AIC and G^2 values decreased from the one- to five-class solutions and the BLRT results showed a statistically significant improvement in model fit (*p* < .001). Comparing the five-class to the six-class solution, BLRT was still significant but to a lesser degree (*p* = .040), and AIC and G^2 values were similar. Classification certainty (entropy) was marginally greater for the five-class solution compared to the four-class solution—0.83 versus 0.82, and did not improve in the six-class solution (0.83). BIC values declined from the one- through four-class solutions, and then increased slightly in the six-class solution. BIC penalizes models with more parameters and thus provides an upper bound indicator for class selection (Lanza & Rhoades, 2013). Fit statistics for models one through six are presented in Supplementary Figure 1.

An equally important criterion for determining the optimal class solution is the interpretability of the abuser subtypes based on the distribution of their conditional probabilities (ρ). Conditional probabilities represent the likelihood that a person within a given subtype will exhibit a characteristic/behavior. High homogeneity of characteristics/behaviors within each subtype is preferable, meaning that conditional probabilities should be close to 0 or 1. In this analysis, the conditional probabilities of the items in the four-class solution were more plausible than the five-class solution.

The results of the four-class solution are presented in Table 3. Abuser subtypes were assigned descriptive labels based on their characteristics/behaviors. Class 1 was labeled *Caregivers* because abusers in this group have a low probability of exhibiting all negative behaviors and a high probability of providing instrumental help and emotional support to the victim. They comprise 38% of the sample. Class 2—*Temperamental* abusers (28%)—tends to be emotionally draining, has trouble controlling temper, and has a low probability of providing emotional support and personal care. Class 3's *Dependent Caregivers* comprise the smallest group—11% of the sample. They provide moderate levels of support to victims but also have trouble keeping a job, are irresponsible, and depend on the victim for money. *Dangerous* abusers, Class 4, make up 24% of the total sample. They exhibit high negative characteristics/

Table 3. Item-Response Probabilities for Four-class Model of Abuser Characteristics and Behaviors Conditional on class Membership (*N* = 336)

Characteristics/behaviors	Abuser subtypes							
	Caregiver		*Temperamental*		*Dependent Caregivers*		*Dangerous*	
	38%		28%		11%		24%	
	ρ	SE	ρ	SE	ρ	SE	ρ	SE
Trouble with the law	0.03	0.02	0.22	0.06	0.59	0.14	0.82	0.06
Trouble keeping a job	0.07	0.03	0.13	0.05	0.95	0.12	0.89	0.07
Emotionally draining	0.23	0.04	0.70	0.06	0.47	0.14	1.00	0.01
Irresponsible	0.10	0.04	0.24	0.07	0.99	0.03	0.89	0.05
Depends on victim for money	0.27	0.05	0.25	0.07	0.89	0.07	0.80	0.06
Drinking problem	0.05	0.02	0.12	0.04	0.48	0.14	0.77	0.07
Trouble controlling temper	0.17	0.04	0.62	0.06	0.47	0.15	0.85	0.05
Helps with personal needs	0.91	0.03	0.23	0.06	0.74	0.10	0.32	0.07
Provides emotional support	0.94	0.04	0.01	0.04	0.99	0.03	0.03	0.08

behaviors (e.g., trouble with the law, irresponsible, unable to keep a job) and low positive behaviors.

The results of the five-class solution are shown in Supplementary Table 1. A fifth abuser profile emerged, descriptively labeled *Temperamental Caregivers*, who are a blend of *Temperamental* abusers, *Caregivers*, and *Dependent Caregivers*. While the frequency of *Dangerous* abusers and *Caregivers* stayed roughly within 1.5 percentage points of those profiles in the four-class solution, the frequency of *Dependent Caregivers* and *Temperamental* abusers declined (from 11% to 7%, and from 28% to 22%, respectively). The relatively small (12%) new subtype exhibits temper control issues and is emotionally draining, but similar to *Caregivers* and *Dependent Caregivers*, they also provide support. Theoretically, *Temperamental Caregivers* are likely the same as *Temperamental* abusers but with one differentiating characteristic—they are also caregivers. We conclude that this is not a sufficient enough distinction to justify the five-class solution. Moreover, *Temperamental Caregivers* have low homogeneity on items indicating that they are not well-differentiated from the other subtypes. Given the mix of qualitative and quantitative evidence, there is stronger support for the four-class solution.

Differences in abuse and demographic characteristics between subtypes

Table 4 presents demographic and abuse characteristics when each abuser is assigned to their best-fitting class. There are significant differences in mean abuser age and victim age between subtypes (*F*(3,332) = 6.03, *p* = .001 and *F*(3,332) = 7.03, *p* ≤ .0001). *Caregivers* and *Temperamental* abusers are older on average than *Dependent Caregivers* and *Dangerous* abusers. The victims of *Caregivers* are the oldest on average (79.2 years) and victims of *Dangerous* abusers are the youngest on average (73.3 years). There are more female abusers (64.3%) in the *Caregiver* class compared

to the other classes, and more male abusers (57.1%) in the *Dangerous* class (χ² = 10.17, *p* = .017). The *Dependent Caregiver* subtype has the highest proportion of abusers who are children of their victims (71.4%) compared to only 37.5% of *Temperamental* abusers (χ² = 16.4, *p* = .001).

Substantiated abuse allegations differ significantly between classes. Emotional abuse is highest among *Temperamental* (65.9%) and *Dangerous* (73.8%) abusers, whereas only 21.7% of *Caregivers* have substantiated reports of emotional abuse. Similarly, physical abuse is highest among *Temperamental* (28.6%) and *Dangerous* (36.9%) abusers and lowest for *Caregivers* (7.8%). *Caregivers* have the highest frequency of neglect (51.9%), and *Dependent Caregivers* have the highest frequency of financial abuse (74.3%). Sexual abuse was substantiated in only seven cases (1.6%), so differences between groups were not analyzed. *Dangerous* abusers have the highest frequency of polyvictimization. They perpetrate 1.92 types of abuse, on average, which can include any combination of neglect, physical abuse, psychological abuse, and financial exploitation. *Caregivers* have the lowest frequency of polyvictimization with an average of 1.3 abuse types per case. Differences are statistically significant (*F*(3,332) = 13.8, *p* ≤ .0001).

Discussion

Although elder abuse researchers have noted diversity in the characteristics of abusers (Jackson & Hafemeister, 2011, 2016), relatively few have sought to define specific abuser profiles and their association with each type of mistreatment. The present analysis is the first to identify and characterize abuser subtypes using data from substantiated APS cases in an LCA model. This approach paves the way for future researchers to develop and test customized intervention programs that address the weaknesses of each abuser subtype individually.

Table 4. Abuser, Victim, and Abuse Types Conditional on Abuser class Membership (*N* = 336)

	Abuser subtypes					
	Caregiver (*n* = 129)	*Temperamental* (*n* = 88)	*Dependent Caregivers* (*n* = 35)	*Dangerous* (*n* = 84)	χ^2/*F*-test	*p*-value
Abuser characteristics						
Mean age (*SD*)	53.5 (16.8)	52.4 (18.9)	45.4 (14.8)	44.8 (14.5)	6.03	.001***
Female	64.3%	59.1%	51.4%	42.9%	10.17	.017*
Adult child	50.4%	37.5%	71.4%	61.9%	16.41	.001**
Partner	18.6%	19.3%	5.7%	10.7%	6.14	.105
Other relative	13.2%	25.0%	11.4%	15.5%	5.91	.116
Non-relative	14.7%	18.2%	11.4%	10.7%	2.17	.537
Victim characteristics						
Mean age (*SD*)	79.2 (9.2)	76.0 (9.9)	75.3 (10.9)	73.3 (8.6)	7.03	<.0001***
Female	70.5%	73.9%	57.1%	64.7%	4.13	.248
Non-Hispanic White	51.9%	44.3%	65.7%	41.7%	7.59	.055
Black	31.8%	39.8%	22.9%	42.9%	5.68	.128
Other	16.3%	14.8%	8.6%	15.5%	1.20	.753
Substantiated abuse types						
Emotional	21.7%	65.9%	40.0%	73.8%	66.39	<.0001***
Physical	7.8%	28.6%	14.3%	36.9%	27.94	<.0001***
Neglect	51.9%	21.6%	37.1%	22.6%	33.17	<.0001***
Financial	48.8%	39.8%	74.3%	58.3%	12.71	.005**
Total abuse types	1.3 (0.56)	1.6 (0.67)	1.7 (0.68)	1.9 (0.85)	13.80	<.0001***

Note: Due to few substantiated cases (*n* = 7), sexual abuse is not presented in the table.
p < .05. **p* < .01. ***p* < .001.

Variations Across Subtypes

Similar to work in the field of IPV (e.g., Chiffriller et al., 2006; Holtzworth-Munroe et al., 2000; Holtzworth-Munroe & Stuart, 1994), our findings demonstrate that abuser subtypes differ with regard to positive and negative behaviors, demographic characteristics, and mistreatment types. Findings supported our prediction that abuser subtypes exist on a continuum of malicious behaviors, with abusers in the *Dangerous* subtype exhibiting highly negative behaviors, and *Caregivers* exhibiting mostly positive behaviors and few negative behaviors. Subtypes also vary by average age of the abuser and the victim, relationship to the victim, and the type and number of substantiated abuse allegations.

On one end of the spectrum, *Dangerous* abusers provide very little personal or emotional support to their victims and exhibit high levels of engagement in every harmful and pathological behavior in the LCA model—they are emotionally draining, financially dependent, irresponsible, and have a history of trouble with the law, difficulty keeping a job, substance abuse, and temper control problems. Three quarters have substantiated emotional abuse allegations, and 36.9% have substantiated physical abuse allegations. The majority of *Dangerous* abusers (58.3%) engages in financial exploitation.

Dependent Caregivers exhibit a mix of positive and negative behaviors and personal attributes. Nearly three quarters are children of the victim, and approximately half are female. These abusers meet the victim's personal care needs and provide emotional support, but are characteristically

irresponsible, have trouble keeping a job, and are financially dependent on the older adult—risk factors identified in Jackson's (2014) review of the literature on abusers. *Dependent Caregivers* have the highest prevalence of financial exploitation (74.3%), followed by emotional abuse (40.0%) and neglect (37.1%). According to Finkelhor's (1983) application of the social exchange theory to family conflict, distressed or dependent family members who feel they lack control may try to reclaim a sense of power verbally or physically abusing the older person. These abuser–victim relationships are likely characterized by an imbalance in instrumental, financial, and emotional support, such that the abuser benefits more from the relationship than the victim. Although *Dependent Caregivers* are the least common subtype (11% of total), their physical, emotional, and relational proximity may place victims at risk.

While not as threatening as *Dangerous* abusers, *Temperamental* abusers are emotionally draining and have trouble controlling negative emotions. They provide the least functional and emotional support. Nearly 60% are female, 37.5% are adult children, and a quarter are other relatives (niece/nephew, sibling, grandchild, etc.). *Temperamental* abusers engage mainly in emotional (65.9%), financial (39.8%), and physical (28.6%) abuse. Only 21.6% have substantiated neglect allegations, perhaps because fewer *Temperamental* abusers identified as the victims' caregivers.

Although there is a natural tendency to view all abusers as "bad apples" who should be punished and kept away from

victims, our findings suggest that a number of abusers also exhibit positive attributes. For example, *Caregivers* provide for the personal and emotional needs of older adults and score low in most negative behaviors. They also accounted for the largest proportion of the sample (38%). Abusers in the *Caregiver* group were typically older than abusers in other subtypes (about 54 years) and tended to be adult children (50.4%) or spouse/partners (18.6%). Despite providing care and emotional support to their victims, 51.9% of them had engaged in APS-substantiated neglect, meaning that they did not provide adequate supervision and/or failed to ensure that the older adult had medication, food, or access to medical treatment.

Caregivers may intend to provide care for older adults but lack the necessary knowledge, skills, and practical ability to do so. In some of the cases, conditions such as malnutrition, dehydration, and poor skin integrity may have been misinterpreted as signs of elder neglect by those who reported the case to APS (e.g., physicians, APS workers), when in fact the elder was experiencing symptoms of end-stage disease. Better forensic tools are needed to assist practitioners in differentiating true neglect from physiological states that appear to be, but are not, elder neglect (DeLiema, Homeier, Anglin, Li, & Wilber, 2016).

The subtypes identified in this study provide empirical evidence to support and augment the abuser profiles described in the literature (see Supplementary Table 2), and demonstrate that different forms of elder abuse are committed by different types of perpetrators (Jackson & Hafemeister, 2016). Jackson's (2014) *Bad Actors*, whose actions are deliberate and premeditated, and Ramsey-Klawsnik's (2000) *Domineering/bullying* and possibly *Sadistic* abusers are most similar to the *Dangerous* abusers in the present study. *Dependent Caregivers* are comparable to Jackson's (2014) *Ready Exploiters* who are capable of engaging in abusive actions if given an opportunity, and Ramsey-Klawsnik's (2000) *Narcissistic* perpetrators who are motivated by personal gain. *Caregivers* are similar to Jackson's (2014) *Reluctant Exploiters* and Ramsey-Klawsnik's (2000) *Overwhelmed* perpetrators, who although qualified to provide care, still neglect the older adult's needs. They may also be analogous to Ramsey-Klawsnik's (2000) *Impaired* abusers who have physical or mental impairments that impede their ability to provide care, or Jackson's (2014) *Ignorant* abusers who similarly are unable to perform caregiving duties.

Developing Targeted Interventions

Results suggest that we may achieve greater success in elder abuse case outcomes by applying targeted interventions that respond to specific abuser profiles. Interventions should focus dually on victims and abusers, and services should be provided simultaneously.

Because *Dangerous* abusers pose the most obvious safety threat to victims, interventions might focus on ensuring that abusers do not have continued access to the victim, such as enacting a protective order or removing the abuser from the home if s/he lives with the victim. Protectively placing the older person in a facility should only take place if more supervision and professional care are necessary to reduce risk of harm.

Many older adults have strong emotional attachments to abusers and severing ties can be more harmful to the older person than the abuse itself. For *Dependent Caregivers*, risk of mistreatment may be mitigated by reducing their reliance on the victim while nurturing positive interactions and compassionate caregiving. Positive outcomes could be achieved by providing alternative housing, financial support, job training, or other life skill training that could increase the abuser's independence and enhance their helpful behaviors. Victims should be empowered to discontinue practices that enable *Dependent Caregivers* to rely on them for housing or financial support.

In contrast, fewer *Temperamental* abusers rely on or provide support to the victim. Instead of caregiver support or job training, these abusers may be aided by mental health services to improve emotional stability and decrease volatile behavior. In the absence of adherence to mental health recommendations or a reduction in aggressive behavior, restricting access to the victim might be necessary, similar to that for *Dangerous* abusers.

Caregiver support, rather than separation from the victim, may reduce the risk of abuse recurrence by *Caregivers* and help preserve the caregiving relationship. Interventions might include education about minimum standards of care and proper financial management and fiduciary practices, or referral to stress management and caregiver respite services.

These targeted interventions may be used as an alternative or supplement to punitive interventions—either criminal or civil—across all types of abusers to reduce risk of future recurrence. Abuser interventions are most effective when combined with efforts to reduce victim vulnerability and establish safe and supportive environmental contexts (Mosqueda et al., 2016). For instance, efforts to remove a *Dangerous* or *Temperamental* abuser from a household should be coupled with long-term services and supports to enhance the victim's independence (Yonashiro-Cho, Meyer, & Wilber, in press).

Limitations

The abuser profiles identified in this study are item and sample dependent. Classifying abusers using APS data from other states or including different indicators in the model may generate additional profiles defined by different characteristics. The sample is biased toward substantiated cases where the APS caseworker could collect information on the alleged abuser. We excluded cases where the victim was deceased, missing, unable or unwilling to share information, where collaterals were not available, or where the caseworker simply did not record abuser information. It is possible that more serious abusers went undescribed in this study due to victim fear of retaliation or concern that the abuser will be punished or taken away, thus resulting in an underestimation of the frequency of *Dangerous* abusers relative to *Caregivers*.

Cases in the sample were substantiated by APS caseworkers, yet their conclusions do not confirm that mistreatment did indeed occur. Some abusers might not have committed elder abuse or neglect, whereas others who did were excluded because the allegations were not sufficiently investigated. Aside from directly observing abuse and neglect occur, APS caseworkers' substantiation decision is the best criterion available. To validate these profiles, researchers should use court records and other data on convicted abusers.

As with other elder abuse studies that rely on APS assessment, there was between 11% and 25% missing information on the selected items. One advantage of LCA is that data are assumed to be missing at random so incomplete cases are not dropped from the analysis. Obtaining data only from victims, collaterals and caseworkers is a limitation that will need to be addressed in the future, perhaps by including questions on abusers in elder mistreatment studies that sample from the general population, and in the National Adult Maltreatment Reporting System (NAMRS).

Conclusion

This study addresses an important gap in the literature by approaching elder abuse from the traditionally understudied side of the dyad—the abuser. Despite its limitations, this study is unique in using standardized measures from actual abuse investigations where reporters and caseworkers were legally responsible for accurate documentation. As such, it demonstrates that recording standardized information on abusers during the course of abuse investigations can generate rich information for research.

The emergence of the abuser pathology theory elicited a move toward criminal justice interventions to curb elder mistreatment through prosecution of abusers and protective orders for victims. These are not the only options available. The abuser subtypes identified in this study have the potential to inform prevention approaches that are individualized to reduce perpetrators' likelihood of harm, such as ensuring that unemployed adult children are not given authority to manage their parents' finances and that families have access to caregiver support resources when their loved ones become ill or disabled. Early identification of potential risk profiles will ultimately lead to more safety and security for vulnerable adults.

Supplementary Material

Supplementary data is available at *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences* online.

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Conflict of Interest

None.

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