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Reducing Repeat Incidents of Elder Abuse:

Results of a Randomized Experiment

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ABSTRACT

Four hundred three residents of public housing who reported an incident of elder abuse to the police were randomly assigned to receive or not to receive two interventions designed to reduce the incidence of repeat abuse. Participants either received or did not receive a home visit from a team of a police officer and social worker. Also, housing projects either were or were not targeted to receive educational materials about elder abuse.

Results showed that the interventions had no effect upon victims' knowledge of elder abuse issues; upon their knowledge or use of social services; or upon their psychological well-being. However, in households which received both public education and home visit interventions, victims were more likely to report new instances of abuse both to police and to research interviewers. Victims who received only a home visit also were more likely to report new instances of abuse to the police, but not to research interviewers.

INTRODUCTION

New currents in policing family violence -- including policies that emphasize arrest and prosecution, community policing, and working to prevent repeat victimization -- have created novel ways of dealing with intimate violence. In this report we describe an evaluation of an elder abuse program run by Victim Services and the New York Police Department. The program, conducted in New York City public housing, had two complimentary parts. One component provided education through leaflets and posters to all elderly residents of participating housing projects. In the second component, crisis response teams (each consisting of a police officer and a social worker) were dispatched to follow up on the initial patrol response to elder abuse reports and to link elder abuse victims and abusers up to long-term social services. The evaluation uses a true experimental design to measure the effects of this intervention upon the willingness of victims to report incidents of elder abuse, reduction in abuse, victims' knowledge of and use of social services, and the psychological adjustment of elder abuse victims.

Background on Elder Abuse

Over the past two decades, domestic violence issues have been the focus of growing attention. Numerous studies have been

undertaken to study violence in the home and to test ways of reducing it. Although a significant amount of research has been conducted on abused wives and abused children (see Chalk and King, 1998; Straus and Gelles, 1990 and Ohlin and Tonry, 1989 for reviews), very little research has been done on the domestic abuse of elderly persons.

The lack of a good understanding of elder abuse and its consequences is worrisome. The U.S. Bureau of the Census predicts that by the year 2030, the population over 65 will nearly triple, to more than 70 million people, and that older people will make up over 20 percent of the population (up from 12.3 percent in 1990) (U.S. Bureau of the Census, 1996). Although it is unknown whether the rates of elder abuse are actually increasing, as Lachs and Pillemer (1995) point out, virtually all state agencies charged with addressing the problem of elder abuse report increases in their caseloads over the past decade (Tatara, 1993).

After the first major report on "granny battering" (Burston, 1975), a movement began to bring to the public's attention the problem of elder abuse. Since the mid-1970s, there have been efforts to increase awareness about elder abuse through a number of smaller studies and policy papers (for a review see Pillemar and Finkelhor, 1988). Reports of elder abuse began appearing in the media at the national and local level in the 1980s (Pillemer and Frankel, 1991), and in mass media publications.

Many states have responded to this new-found interest with protective legal service programs and direct service programs for

victims (Decalmer and Glendenning, 1997; Quinn and Tomita, 1997). Since 1980, almost all fifty states have passed some type of legislation mandating the reporting of elder abuse. Task forces on elder abuse have been formed in almost all major cities, and police departments are starting to include an elder abuse component in officer training (Pillemer and Suitor, 1990). Federal and state governments have over a decade of legislative activity in the area of elder abuse, but critics have argued that support for interventions for elder abuse have only been symbolic. For example, Boudreau (1993) argues that federal programs to reduce elder abuse have been unfunded or under funded, as have state attempts to implement mandatory reporting laws.

Definitions of elder abuse Although interest in the field has grown substantially over the last 20 years, experts have found difficulty creating a singular definition elder abuse and there is still little data on the consequences of abuse on victims (Wolf, 1997). Federal definitions of elder abuse, neglect and exploitation appeared for the first time in the 1987 Amendments to the Older Americans Act. These definitions were provided in the law only as guidelines for identifying the problems. Current definitions vary by state and from one jurisdiction to another in terms of what constitutes abuse. There are three basic categories of elder abuse: (1) domestic elder abuse (2) institutional elder abuse and (3) self-neglect or self-abuse. The focus of our study was domestic elder abuse.

Domestic elder abuse generally refers to any of several forms of maltreatment, physical abuse, sexual abuse, psychological abuse, neglect and financial exploitation of an older person. Physical abuse is defined as the use of physical force that may result in bodily injury, physical pain or impairment. Sexual abuse is defined as non consensual sexual contact of any kind with an elderly person. Emotional or psychological abuse is defined as the infliction of anguish or distress through verbal or nonverbal acts. Neglect is defined as the refusal or failure to fulfill any part of a person's obligations or duties to an elder and financial exploitation is defined as the illegal or improper use of an elder's funds, property or assets (NCEA, 1998).

Prevalence While the extent of domestic violence as a whole has been well documented (e.g., Feld and Straus, 1989; Straus, Gelles and Steinmetz 1980; Straus and Gelles, 1990), only recently have reliable estimates of the extent of elder abuse been produced. The few prevalence studies done on elder abuse in the 1970s and early 1980s were small, nonrandom, and largely exploratory in nature (Pillemer and Frankel, 1991).

Pillemer and Finkelhor (1988) conducted the first large-scale stratified random sample survey of elder abuse and neglect through interviews with 2,020 community-dwelling elderly persons (65 or older) in Boston. Pillemer and Finkelhor extrapolated that, if a national sample confirmed the 3.2% elder abuse rate they found in Boston, it would indicate between 701,000 and 1,093,560 abused elders in the nation as a whole. Two other studies that also used

a stratified random sample methodology derived comparable prevalence estimates for elder abuse in Canada (Podnieks and Pillemer, 1989) and for spouse abuse between elderly U.S. couples (Straus and Gelles, 1990). The National Center on Elder Abuse (NCEA) is currently working on a national study of abuse, neglect, and exploitation of older people (NCEA, 1998).

Virtually all state agencies charged with addressing the problem of elder abuse report increases in their caseloads over the past decade (Tatara, 1993). Furthermore, more general demographic trends suggest that the number of elder abuse cases will increase in the coming years (U.S. Bureau of the Census, 1991). This is true because elderly persons are increasing in numbers as life expectancy increases. The NCEA estimates an increase of 150% in reported cases of elder abuse nationwide since 1986, and it estimates that more than one million cases were reported in 1996 (NCEA, 1998).

Underreporting It is well-known that spouse abuse is largely unreported (Straus and Gelles, 1990; Harris and Associates, 1979; Dutton, 1988). Evidence suggests that underreporting is also a problem in elder abuse cases. Pillemer and Finkelhor (1988) estimated that only 1 in 14 cases of elder abuse are reported to the police. Others have reported that only 1 in 6 cases of elder abuse are reported to the police (Kosberg, 1988), and the Nebraska Domestic Violence Sexual Assault Coalition (1993) has put the estimate at 1 in 16 cases. Many reasons have been given for why elder abuse victims are unwilling to report crimes committed

against them to the police and go for help. Clinicians have noted that victims may be ashamed to admit the problem, that they may be unaware that services exist to help them, or that they may feel their situation is helpless (Marin and Morcycz, 1990). One study found depression and feelings of helplessness to be barriers to reporting by elder abuse victims (Pillemer and Prescott, 1989).

Psychological effects of elder abuse Victims of violence are likely to experience self-blame, self-doubt and lack of social support but unlike other types of violence, the impact on older adults is further complicated by the general inherent difficulties of aging. The literature contains little empirical data on the consequences of elder abuse on victims. However, clinical accounts have documented severe emotional distress among mistreated elder persons as well as an increased mortality rate (Wolf, 1997). A small number of studies have shown that abused elders often exhibit higher levels of depression than non-abused elders (Phillips, 1983; Pillemer and Prescott, 1989; Wolf, 1989; Harris,1996). The literature has also suggested that abused elders respond to their abuse through learned helplessness (Solomon, 1983) or denial that the abuse is occurring (Tomita, 1990).

Risk Factors The first study of elder abuse risk using a representative community sample was conducted by Pillemer and Finkelhor (1988). Based on interviews with 2,020 elderly residents of Boston, they concluded that elder abuse is a reflection of abuser characteristics (such as prior life stress and history of violence outside the home) and financial dependence on the victim.

Recently, Lachs, Williams, O'Brien, Hurst, and Horwitz (1997) reported on the results of a community sample of elderly adults which was correlated to elderly protective service records. The researchers found that about 6% of the sample had been involved with protective services. Risk of involvement with protective services was found to increase with age, poverty, functional disability, and cognitive impairment. Wolf (1997) points out that risk factors are not necessarily causal, and that there is still insufficient knowledge to build a theory of elder abuse.

Interventions Although there has been an increase in the number of service programs for victims of elder abuse in recent years, elder victims are still an under served population (AARP, 1994; Vinton, 1992; McKibben, 1988). In their review of the literature, McDonald, Hornick, Robertson, and Wallace (1991:68) discuss three general types of programs for elder abuse: adult protection service programs, domestic violence programs, and advocacy programs. The adult protection approach is similar to the child welfare model, including strategies such as power of removal, compulsory custody and court-ordered services, and geriatric evaluations (McDonald, et al., 1991:68). In addition, many state agencies can provide concrete services, such as income support or material aid, institutional placement, mental health services, in-home services, supervision, education, transportation, housing, medical and legal services, in-home assistance, casework, and so on. All 50 states have some form of adult protective service program to investigate referrals of cases of abuse or neglect of

the elderly, although such programs are comparatively recent in some regions (Chalk and King, 1998). Some authors are critical of this approach they believe that limits the right of victims to self-determination (Macolini, 1995; Knapp, 1995).

The domestic violence model for elder abuse involves crisis intervention services, a stronger role for the police, court orders for protection, shelters, support groups for the abused and abuser, public education on the rights of victims, and the use of a whole range of health, social and legal services (McDonald, et al., 1991:71). Successful prevention programs based on this model advise elder abuse victims concerning health, financial, and legal problems (Reis and Nahmiash, 1995).

The Advocacy Program Model involves speaking for or acting on behalf of elder victims in order to ensure that their needs are met and their rights are respected (McDonald, et al., 1991:72). This approach includes community-based education and training for care givers and the elderly (Gold and Gwyther, 1989; Weiner, 1990). Advocacy also encourages prevention that takes into account differences between cultures in defining and responding to elder abuse (Anetzber, et. al., 1996; Njeri and Nerenber, 1993). Experts have stressed the importance of coalition building, research, and the development of a national reporting system (Wolf, 1997; Blakely and Dolan, 1991).

Evaluations of Elder Abuse Programs Although a large number of evaluations have been conducted on the effectiveness of domestic violence programs in general, little research has been

done on the effectiveness of programs for elder abuse programs specifically. Consequently, while many researchers have called for systematic evaluations of elder abuse programs (Wolf, 1992; Marin and Morcycz, 1990; Pillemer and Frankel, 1991; Pillemer and Suitor, 1988), little is known about the effectiveness of various types of interventions for elder abuse.

Our search of the literature turned up only a few evaluations of elder abuse programs. Scogin, et al. (1989) evaluated a training program for care givers. The rationale of the program is that a lack of understanding of the needs and care of the elderly by care givers may contribute to mistreatment. This evaluation showed relatively little change over time for any group on the participants' self-esteem or level of anger. Training was associated with a slight reduction in the reported costs of providing care at a rate that approached statistical significance. Both the control and the delayed training group showed increased symptoms of distress over time, and the training group reported a definite decrease in symptoms. Hwalek, Hill, and Stahl (1989) examined four state-funded elder abuse demonstration projects, and provided several recommendations about the organization and delivery of services to elder abuse victims. The study was designed to provide the Illinois legislature information on the costs of providing services to elder abuse victims, the extent of elder abuse, the characteristics of elder victims, and the issues typically addressed by the project staff. The study did not include an assessment of the effectiveness of these programs in reducing

elder abuse.

Wolf, Godkin, and Pillemer (1984) studied three model projects in Massachusetts, New York, and Rhode Island which provided and coordinated various services for elder abuse victims, and educated the community about elder abuse and neglect. The evaluators compared the efficacy of the three models to one another based on staff notes on client progress in 328 program case files. (The comparison did not include interviews with victims, nor was there a control group to compare to the three treatment modalities.) A second component of the research contrasted the responses of 59 elder abuse victims in the three programs to those of 49 non-abuse clients. The evaluation led to useful recommendations for improving the three local elder abuse programs, but was not designed as a rigorous test of the effectiveness of the treatment models examined.

Dunkle, et al. (1983) used an experimental design to test the effectiveness of an adult protective service program in Cleveland. However, the integrity of the random assignment process was compromised, and the authors found little or no difference in the delivery of the "treatments" between the experimental and control groups. Additionally, the Cleveland study did not interview the victims but rather used the records of the case workers to construct outcome measures.

The Elderly Abuse Support Project of Rhode Island's Department of Elderly Affairs provides assistance, support, and advocacy to elderly victims of abuse in the utilization of the criminal justice

system. Trained volunteers spent an average of two hours a week with the victims, providing information and encouragement in pressing charges, obtaining restraining orders, providing transportation, and assisting with completion of reports and forms. According to Chalk and King (1998) several limitations of the study prevent a conclusive statement about the intervention, including the small sample size, a possible mismatch between the control and treatment groups, and systematic bias in the completion of the forms. The study, though, suggest that the volunteer program could lead to more extensive monitoring of cases, more ambitious goal-setting, and greater achievements of goals Chalk and King, 1998).

The Changing Police Response to Family Violence

Police departments are developing new ways of thinking about family violence. A wave of change starting in the 1980s moved the police from a social service role in dealing with domestic violence toward a strict law enforcement role (Sherman, 1992). While police departments once were accused of not treating domestic violence as a crime (Hirschel, Hutchinson, Dean and Mills, 1992), many, if not most, departments now work under internal directives and state statutes that prescribe arrest for the perpetrators of many domestic disturbances. The result has been a substantial increase in domestic violence arrests and prosecutions (Cahn, 1992; Jaffe, Hastings, Reitzel, and Austin, 1993; Davis, Smoth, and Nickles, 1997).

During the 1990s, community policing has become the watchword

for law enforcement (Skogan and Hartnett, 1997; Rosenbaum & Lurigio, 1994). Its growing popularity can be found among police administrators, politicians, and private citizens. President Clinton incorporated community policing into the Crime Bill of 1994, and its proponents have heralded community policing as a revolutionary change in policing (Uchida & Forst, 1994). Additionally, it has been touted as the "only form of policing available for anyone who seeks to improve police operations, management, or relations with the public" (Eck & Rosenbaum, 1994, p. 4).

Community policing centers around police-citizen partnerships that attempt to solve problems before they erupt into more serious incidents (Skolnik and Bayley, 1986). It also requires a decentralization of police operations, putting police officers "back on the streets" (Greene and McLaughlin, 1993). Contrasting with the professional model, community policing underscores the importance of direct engagement with citizens and flexible responses to neighborhood disorder and crime. In short, community policing necessitates a change in the fundamental philosophy of policing: from a squad patrol orientation to a foot patrol orientation; from reactive, incident-driven responses to proactive, problem-driven responses; from part-time, short-term district assignments to full-time, long-term district assignments (Greene and Taylor, 1988).

British research has made it clear that any program incorporating a problem-solving approach to policing should pay special

attention to repeat victims, who contribute disproportionately to crime statistics, especially in high-crime areas, (Trickett, Osborne, Seymour, and Pease, 1992). The British have been leaders in working with victims to prevent revictimization, arguing that it is an efficient way to use police resources to reduce overall crime (Farrell and Pease, 1993; National Board for Crime Prevention, 1994). This strategy is also taking hold in the U.S., for example in Sherman's "hot spot" research in which a proactive approach was taken by law enforcement toward households which generated multiple calls for assistance (Sherman, 1989).

These currents of change -- taking a harsher stance toward family violence, community policing, and working to reduce the incidence of repeat victimization -- have come together to create new ways to deal with households where violence occurs. Sherman's (1989) work on "hot spots" in Minneapolis is a good example. The Minneapolis police tracked crime reports by address and intervened proactively at locations were found to generate multiple calls, many of which were between household members. Consistent with the philosophy of community or problem-oriented policing, police actions included bringing in other city agencies where appropriate to address problems of building code violations,

The New York Model

The elder abuse intervention model we evaluated in New York blended all three of these current law enforcement trends in dealing with family violence. One part of the intervention

consisted of public education, an integral element of community policing. Presentations on elder abuse were made at public housing tenant association meetings. The presentations discussed definitions of abuse, the legal rights of victims, and assistance provided by the police and social service agencies. In addition to the presentations, posters were placed in public areas of housing projects and leaflets distributed to all elderly residents.

The other component of the intervention consisted of a strong law enforcement response designed to prevent repeat incidents of elder abuse. A team consisting of a police officer and a social worker followed up on domestic violence complaints with a home visit within a few days of the initial patrol response. During home visits, the team social worker informed victims of their rights and about services available to assist them (for example, relocation assistance, emergency financial assistance, counseling, etc.). Victims were encouraged to call the police if repeat violence occurred. The police officer team member talked to batterers to make it clear to them that the household was being monitored by the police department. The counselor linked the victim and/or abuser to social services, including relocation assistance, abuser intervention (respite care, care giver support groups, substance abuse treatment, etc.), health care assistance, or anti-harassment measures (changing locks or phone numbers, direct deposit of social security checks, etc.).

There was reason to believe that the intervention would be effective. Davis and Taylor (1997) evaluated essentially the same

intervention for domestic violence victims. Their study used a true experimental design in which housing projects were randomly assigned to receive or not to receive education about domestic violence and households reporting domestic incidents to the police were randomly assigned to receive follow-up home visits or to receive only the usual police patrol response. Six months later, households that received either the home visits or public education were significantly more likely to call the police about future incidents than those in the control condition. However, we found no difference in violence between both sets of treatments and controls according to victims interviewed six months after the initial call to the police.

Because complaints to the police increased as a result of the intervention but violence apparently did not, we interpreted these findings to indicate that the intervention increased victims' confidence in the police and made them more willing to report violence when it occurred. If this interpretation is correct, the research is highly significant because it would be, to our knowledge, the first demonstration that a programmatic response to domestic violence could increase victims' willingness to call the police.

We reasoned that, if our interpretation was correct and the intervention increased victim's willingness to report abuse to the police, then there should eventually be a reduction in violence. The six month follow-up interval used by Davis and Taylor may have been too short to adequately test for reduced violence. During a

longer interval, however, a greater willingness to summon police when abuse occurs ought to deter abuse.

In the present study, we evaluated the same public education-home visit intervention used by Davis and Taylor, but applied it to elder abuse. Like the earlier study, the present research design used a true experimental design. This time, however, households which reported abuse were followed for a full year after the initial intervention.

The research is significant in several respects. First, it is among the only methodologically strong evaluations of an elder abuse intervention. Second, it provided information about the dynamics of elder abuse cases: What circumstances result in abuse of an elderly person, and what service needs exist in such households? Finally, the evaluation enabled us to test whether the greater number of calls for police service from victims who receive either public education of home visits would, in the long run, deter violence.

II. METHOD

Overview

The study employed community-level and individual-level interventions combined in a nested randomized experimental design. First, sixty public housing projects were assigned to one of two levels of public education. Once the public education treatment had been implemented, 403 residents of the 60 projects who reported elder abuse to the police during the next 10 months were assigned to one of two levels of follow-up to the initial police response.

Victims were interviewed about new violence following the intervention on three occasions: six weeks after intake, six months after the first interview and twelve months after the second interview. Official data on new complaints to the police were gathered up to one year after the trigger incident .

Sampling Frames

The study incorporated dual sampling frames to assess the effects of the community-level intervention (public education) and the individual-level intervention (follow-up home visits) on individual outcomes. Sixty public housing projects in the borough of Manhattan located within three Police Service Areas (PSAs) comprised the sampling frame for

the public education intervention. A public housing PSA is a police administrative area similar to a precinct. PSA 4 covers all of lower Manhattan; PSA 5 covers mid-town to 125th Stree; and PSA 6 covers 125th Street to the Northern tip of Manhattan.

The sampling frame for the follow-up home visit included residents of the sixty housing projects 55 years or older Eligible cases consisted of those classified by police as domestic incidents involving persons 55 years and older, who reported an incident of elder abuse to the police between 1/1/96 and 10/30/96. During that time, 439 cases were taken into the sample, an average of 1.3 cases per day. Thirty-four of these cases were dropped because they did not meet the study's requirements. The majority of the cases dropped were child custody disagreements (11) or cases classified as unfounded (8). Other reasons for dropping cases were language barriers, incorrect documentation of age, incorrect documentation of address, and errors in the police report.

Victims were overwhelmingly female and minority. Eighty-one percent of the victims were women; 66% were Black and 30% were Latino. Median age of the victims was 65 years. Although income level varied, 39% reported incomes between $5001- $9,999 and 17% reported incomes of less than $5,000. Two thirds of the sample (84%) reported having a high school education or less. Fifty-one percent were

retired and 28% were on disability. Almost half (45%) of the victims lived with the abuser.

Perpetrators were largely (66%) male. Their median age was 36 years, and 25% were younger than 25. The race of the perpetrators reflected that of the victims: Sixty-five percent were Black and 30% were Latino. Fifty-three percent of the perpetrators were children of the victims, 19% were grandchildren, 16% were romantic intimates (either spouses or boyfriends/girlfriends), and the remainder were other relatives.

A plurality (49%) of the trigger incidents involved only verbal arguments. Most of the others were classified by the police as family disputes (15%) and misdemeanor offenses (9%). Just a few incidents were serious enough to deserve their initial classification as felony offenses (3%) or the arrest of the offender (6%). Physical injuries were reported by the police in 4% of incidents and hospitalization of the victim in just 3%.

Treatments

Public education The public education intervention was made possible through the cooperation of New York City Housing Authority (NYCHA). It consisted of several components, including distribution of leaflets, hanging of posters, and community presentations. Brochures and posters describing elder abuse and giving phone numbers for

assistance were distributed to building managers at our intervention sites. The managers placed the posters in lobbies, laundry rooms, mail areas, rental offices and other common areas. Brochures were delivered to the apartments of elderly residents.

Community presentations were conducted at targeted housing projects. Generally, the presentations took place in the NYCHA Senior Center adjacent to the housing project. If a NYCHA senior center was not available then the presentation was conducted at a local senior center or at a tenant association meeting.

Community presenters followed a uniform protocol for presenting the information. Presenters introduced an example of elder abuse from their caseload. They proceeded to define elder abuse as a crime and explain the different perpetrators such as care givers, family members living at home, spouses and adult children. Emotional, physical, sexual, and financial abuse were defined as forms of elder abuse and a video was presented to illustrate these concepts. Presenters also explained the role of the police and Victim Services senior specialists. Finally, the difference between Family and Criminal Court and strategies for gaining an Order of Protection was explained.

In PSA 4, 100 out of a potential 3736 elderly in the treatment group participated in the community presentations. In PSA 5, 188 individuals participated out of a potential

4202 and in PSA 6, 396 individuals participated out of a potential 3447

Follow-up home visits Follow-up visits were made to designated victims who reported elder abuse to the police. The visits were conducted by teams from the Domestic Violence Intervention and Education Program (DVIEP), a joint program of the New York Housing Police Department and Victim Services started in 1984. Each team consisted of a police officer specializing in domestic violence and a social worker.

Cases targeted for home visits received a letter and phone calls which provided referral numbers and notified of an upcoming home visit. During the home visit, the DVIEP team discussed current and past abuse with victims, and provided information about elder abuse to the victims. The team emphasized to victims that elder abuse is a crime and the team explained procedures for filing an Order of Protection and the difference between Family Court and Criminal Court. If the offender was present, the police officer informed the abuser that the household was being monitored. Four weeks after the initial home visit, the victim received a follow-up telephone call from the counselor. Each victim was given the name and telephone number of their local DVIEP counselor and other local Victim Services Counselors specializing in elder abuse. The team

assessed the household for service needs and made referrals as needed to respite care, counseling programs for abusers, home care services for seniors, and so forth.

According to the victim surveys, 37% of the home visits lasted between 5 and 10 minutes, 31% between 10 and 20 minutes, 25% between 20 and 30 minutes, and the remaining 30 minutes or longer. Offenders were present during the home visit in just 5% of the cases. Seventy-nine percent of victims remembered discussions of hot lines during the home visit and 77% remembered receiving referrals. A majority of victims (59%) also remembered the team explaining the difference between family and criminal courts.

Cases not assigned to the home visit group received the initial patrol response to the elder abuse complaint. They also received a generic DVIEP letter which was similar to the intervention group's letter but omitted information on elder abuse and information about the home visit.

Assignment Process and Case Intake

Community-Level Intervention The projects in each PSA were sorted into pairs matched for demographic similarities, including income, race, and family composition. Then, using a random number scheme, one member of each pair was assigned

to receive the public education treatment and the other was assigned to the control condition.

Individual-level intervention Cases were drawn from complaints of elder abuse made to the Housing Police Department (HPD) in the three participating PSAs. Domestic violence counselors screened police files daily for victims over 55 years of age. Cases were randomly assigned to the treatment group based on Domestic Incident Report (DIR) complaint number. Odd numbered DIRs were assigned to receive follow-up home visits, while even numbered DIRs were assigned to the control group. Cases were then entered into a case log which was used to trigger home visits by the DVIEP team and interviews by a research assistant..

In randomized experiments, it often happens that some cases do not receive the treatment to which they were assigned. In our experiment, few cases assigned to the control (no home visit) condition through the randomization process received a home visit. In three control cases the random assignment designation was overridden by DVIEP supervisors due to concern about possible harm to the victim if the intervention was withheld..

More common were cases assigned to receive home visits in which victims were not at home during either of the two attempts that were scheduled for each household. Only 49.8% of the victims assigned to the home visit group received the

full intervention. Nevertheless, in an additional 22.5% of the cases, our records document some level of interaction between the home visit group and the family unit, mostly through phone conversations with the victim or personal contacts with some of the family members during the attempts to reach the victim. Counselors were to have completed the home visit two weeks after the initial patrol response to an elder abuse complaint. In fact, however, only 24% of the households assigned to the experimental group had received some level of intervention within two weeks and only 50% of the households had received some level of intervention within six weeks -- the point at which our first interview was conducted. These latter percentages, refer also to attempts, not only to successful home visits. On average there were 56 days between the intake date and the home visit date. The delay was due to difficulties to reach the victims with the resources available.

We and other evaluators have argued (Davis and Smith, 1994; Gartin, 1995) that the fact that an intended treatment which is not always actually delivered does not reflect a weakness of the experiment. The test was of a public policy intervention -- a program to make *reasonable efforts* to conduct follow-up home visits within time and budgetary constraints. Only in a perfect world would every household have received the intended follow-up visit. Researching such a system might tell us about the effect of a home

visit, but would not inform us about a *public policy which attempts to conduct home visits* This issue is discussed further in the section below explaining our data analytic approach.

Differences Between Experimental and Control Households

Randomization does not guarantee that experimental and control households will be equal in all important respects prior to delivery of treatment.. In order to assess the similarity of these groups we compared them on various demographic measures and on the severity of the trigger incident. The experimental and control groups did not differ on any of the trigger incident characteristics that we measured weapon use, injury or hospitalization of the victim, classification of the incident as a felony, arrest of the offender, existence of an order of protection against the offender, and resistance to arrest. Neither did the groups differ on most demographic measures, including ages of victim and perpetrator, race of perpetrator and victim, and nature of the relationship between perpetrator and victim. Nevertheless, we found significant differences on ethnicity and sex between the home visit and the control group. Victims in the home visit group were more likely to be Hispanic (36.9% vs. 25.8%, p=0.02). In addition, perpetrators in the home visit group were more likely to be male (71.2% vs. 61.8%, p=0.04) and to be Hispanic (38.1% vs.

25.9%, p=0.01). The implications of these differences are discussed in the section below detailing the analytic approach. There were not significant differences on any of the variables mentioned above between the victims in the public education and the control group.

Survey Methodology

The principal hypothesis our research tested was that the interventions would lead to greater reporting of elder abuse to the police which, in turn, would lead to reduced abuse. In addition, we reasoned that any treatment effects would be maximal soon after subjects received the full treatment, and decay with the passage of time after intervention. Therefore, we sought to conduct a comprehensive assessment of forms of abuse (physical, psychological, and financial) through interviews conducted with victims 6 weeks after the trigger incident, 6 months after the trigger incident, and 12 months after the trigger incident.

In addition to capturing information on new acts of abuse, the interviews also included several other measures likely to be influenced by the interventions, including knowledge about elder abuse, knowledge and use of services, satisfaction with the police, and willingness to call the police. In addition, on the theory that abuse would be

lessened, we incorporated measures of self-esteem and well-being.

The principal means of conducting interviews with victims was by telephone. All first wave interviews were conducted using this modality. During the second and third waves of interviews, we received assistance from NYCHA in locating victims who had moved. During later interview waves, we sent teams of interviewers to victims' homes if telephone attempts failed. If the home interviews attempts also failed, we mailed letters offering first $25 and then $50 for completion of an interview.

Completion rates Our completion rate with victims was 67% for the first interview, 69% for the second interview, and 67% for the third interview. Between one-third to one-half of cases in which we failed to interview victims were due to victim refusals. (The refusal rate for victims was 11% for the first interview, 14% for the second interview, and 14% for the third interview.) We lost 3% of our sample to out of town moves and 2% to death and illness. The remainder of those not interviewed could not be contacted by phone or visits to their homes.

Interview non-completion did vary significantly by treatment group. At the conclusion of the first interview, 25.8% of the Home Visit group did not complete the survey compared to 35.1% of the control group ($p=0.04$). At the

conclusion of the second interview, 27.1% of the home visit group did not complete the survey compared to 35.1% in the control group who did not complete the interview (p=0.08). At time three, 29.7% of the home visit group did not complete the survey compared to 39.7% of the people in the control group(p=0.03). We run a model to predict non-completion of the interviews using age, race and ethnicity of the perpetrator, type of relationship, seriousness of the triggering incident, and the interventions as the covariates. Only being in the home visit group was a significant predictor of not completion of the survey.

Interview content Victim interviews included (a) background information (demography); (b) measures of physical, emotional and financial abuse; © measures of dependency of the victim and the perpetrator; (d) awareness and use of services; (e) satisfaction with the police; (f) assessment of service delivery; (g) self esteem, (h) well-being; (I) knowledge of elder abuse. Interviews at the three time points were identical except for the omission of background information on second and third interviews.

A) Background Information: (1st Interview only)

We collected demographic data on: age, gender, ethnicity, education, employment, income, legal relationship with abuser, living situation, number of people in household, and health.

B) Measures of abuse:

Measures of abuse included physical, psychological and financial abuse. To assess history of violence and frequency and severity of violence, we used a variant of the Conflict Tactics Scale (Straus, 1979) adapted by Pillemer and Finkelhor (1988) in their elder abuse research. This modified versions of the CTS contains scales of physical, psychological, and financial abuse. The physical and psychological abuse scales exhibited relatively good Cronbach's alphas in the three surveys: between 85 and 87 for the physical abuse scale and between 74 and 77. The financial abuse scale, however, was not that good with Cronbach's alphas between 35 and 50. The total abuse scale (a composite measure of the physical, psychological and financial abuse scales) also showed strong reliability with Cronbach's alphas between 87 and 85.

C) Dependency

To assess mutual dependency of victim and abuser, we used the dependency index developed by Pillemer (1985b). It consisted of a series of items in which the victim responds to how much the abuser depends on them and how much the victim depends on the abuser in a number of areas (e.g., housing, cooking and financial support). Very few of our respondents were dependent on their abusers.

D) Awareness of services

To measure knowledge and the use of social services, we adapted a scale used in our earlier research (Davis and Taylor, 1997). Victims were presented with a checklist of available service for elder abuse victims. For each item, respondents were asked if they knew about or had used a list of six specific services, including legal assistance, emergency financial assistance, counseling, and so on. The six-item Use of Services Scale exhibited a Cronbach's alpha oscillating between 45 and 56. The twelve-item Awareness of Services Scale exhibited Cronbach's alphas between 66 and 70.

E) Satisfaction with the police

Victims were asked an (array of questions) dealing with willingness to call the police. Victims were also asked to rate their satisfaction with the police response.

F) Assessment of Service Delivery

To ensure that victims assigned to the home visit and public education conditions, we asked victims whether they received the intervention. We also asked victims questions about the salience and impact of the intervention.

G) Self esteem

We used the Rosenberg Self-Esteem Scale (Rosenberg, 1979) to gauge self-perceptions of victims. This 13-item scale required individuals to rate themselves through a series of statements such as "I am able to do things as well

as most other people." Victims rated the statements from strongly agreeing to strongly disagree. The Cronbach's alphas for thus scale oscillate between 84 and 85 for each of the three surveys.

H) Well-Being

The Bradburn Affect-Balance Scale was administered to tap the affective status of the victims in our sample. The scale requires that participants answer yes or no to questions such as, "Looking at your present situation, have you ever felt lonely or remote from other people.?" This scale has commonly been used to assess well-being in elderly populations. However, it exhibited a Cronbach's alpha of 56 in the three surveys.

(I) Knowledge

To assess knowledge of elder abuse, we created a list of questions based on the information provided at the community presentations. Participants were asked to identify whether statements such as "Elder abuse may be emotional as well as physical." were true or false. This five-item scale showed a strong reliability with Cronbach's alphas between 57 and 69 .

It was our original intent in the analysis of survey data to examine outcome measures at one, six, and twelve months after the time cases were taken into the sample. However, an examination of the data revealed that many home visits took place after the one-month interview was conducted. Therefore,

in the analysis presented below, we omit data from the first survey wave and focus on the second (6 months after assignment to treatment) and third (12 after assignment to treatment) survey.

Outcome Measures Collected from Criminal Justice Records

The DVIEP databases maintained on households at each of the three participating PSAs were searched to determine if new incidents of abuse were reported for households in our sample within 12 months following the trigger incident. When new cases were found, we recorded complaint date, type of abuse reported, charge, whether an arrest was made, use of weapons, and injury.

III. RESULTS

The intent of the two interventions was to improve victim's awareness and use of resources, victim's knowledge of elder abuse, and the willingness of victims to call the police. The theory behind the interventions posited that, through the provision of information and the impression of increased police surveillance, a reduction in repeat victimization would be observed. This reduction of repeat victimization and the provision of supportive services was expected to have an effect on the psychological health and well being of the victims. From these expectations we derived a set of hypothesis to be tested:

> H1: Victims receiving the two interventions would exhibit more awareness and use of resources and knowledge of elder abuse than victims in the control group.
>
> H2: Victims receiving the two interventions would exhibit lesser levels of repeat victimization than victims in the control groups as measured by both criminal justice and survey data
>
> H3: Victims receiving the two interventions would exhibit greater psychological well-being than victims in the control group.

Our initial intention was to analyze the data taken into account their nested or hierarchical structure. We were interested in learning how an individual level intervention - home visits- implemented at the same time that a community level intervention -education campaign- influenced repeat

victimization. To estimate variations in repeat victimization risk, we wanted to apply hierarchic linear modeling procedures to nest individuals within housing projects. In particular, we plan to use software that allows the modeling of count outcomes within a multilevel framework.

However, our attempts to perform this kind of analysis were only partially successful. We were able to examine a random coefficient model using police data to assess the relevance of the different treatments and their interaction controlling for ethnicity and gender of the perpetrator. Nevertheless, the unbalanced nature of the data, with some housing projects having a relatively large number of victims and some not having any victim or only a few, combined with the number of individuals that were not localized or refused to participate in the surveys, did not permit to attain convergence in the models that used survey measures of our outcome variables. After trying different solutions, we decided to use a less ambitious approach and analyze the data at the individual level. Before describing this analysis, we have to recognize that there are potential problems with this approach. In particular, we might be violating the independence between the observations. In order to address that issue, we decided to compare the results of our multilevel analysis using the police data with the results of the disagregated analysis and we found no differences in the significancy and direction of the effects.

In analyzing each of the four outcome measures, we began by examining means and standard deviations according to treatments. Then, we proceed to the implementation of multivariate analysis to examine the effect of the treatments.

Knowledge of Elder Abuse and Awareness of Services

Table I displays the means and standard deviations for the scales of knowledge about elder abuse, awareness of services, and use of services. Each of the three outcomes is examined at six months and 12 months after the first police intervention. Means are compared for the group that did not receive any intervention, the group that received only the home visit, the group that received only public education, and the group that received both a home visit and public education. The study of this table does not reveal any significant pattern among the means. There is no evidence that the interventions affected knowledge about elder abuse or awareness and use of services.

Psychological Well-Being

Table 2 presents the means and standard deviations for different measures of psychological well-being. Included in the table are the summary self-esteem score and several measures derived from the Bradburn Affect Balance scale, including positive affect, negative affect, and affect balance. Differences across experimental conditions are

TABLE I. MEANS AND STANDARD DEVIATIONS: KNOWLEDGE OF SERVICES AND ELDER ABUSE				
	None	Public Education	Home Visit	Both (PE+HV)
Awareness of Services 6 months	4.16 (1.54)	3.78 (1.84)	3.93 (1.56)	4.13 (1.49)
Awareness of services 12 months	3.89 (1.69)	4.11 (1.77)	4.05 (1.73)	4.28 (1.45)
Use of services 6 months	0.70 (0.89)	0.54 (0.85)	0.83 (1.12)	0.84 (1.02)
Use of services 12 months	0.82 (1.18)	0.50 (0.81)	0.84 (0.93)	0.81 (1.05)
Knowledge of elder abuse 6 months	14.29 (1.09)	13.81 (2.36)	13.66 (1.59)	13.98 (1.81)
Knowledge of elder abuse 12 months	14.05 (1.48)	13.62 (1.57)	13.87 (1.43)	13.66 (1.94)

TABLE II. MEANS AND STANDARD DEVIATIONS: PSYCHOLOGICAL WELL BEING				
	None	Public Education	Home Visit	Both (HV+PE)
Self-Esteem (6 months)	41.64 (5.66)	41.48 (5.21)	41.28 (5.77)	41.67 (5.28)
Self-Esteem (12 months)	41.98 (5.24)	43.12 (5.48)	41.32 (6.63)	40.97 (6.07)
Affect Balance (6 months)	6.20 (1.56)	6.40 (1.70)	6.57 (1.84)	6.63 (1.79)
Affect Balance (12 months)	6.03 (1.84)	6.41 (1.77)	6.31 (1.55)	6.60 (1.80)
Positive Affect (6 months)	4.14 (0.87)	4.12 (0.98)	4.20 (1.07)	4.33 (0.83)
Positive Affect (12 months)	4.00 (1.17)	4.03 (1.04)	4.30 (0.95)	4.30 (0.97)
Negative Affect (6 months)	2.93 (1.29)	2.71 (1.48)	2.62 (1.66)	2.69 (1.60)
Negative Affect (12 months)	2.96 (1.60)	2.62 (1.39)	2.98 (1.39)	2.69 (1.47)

minimal for all measures at both 6 and 12 months. Nothing in these data suggest that the interventions affected victims' psychological states.

New abuse

Table 3 compares the different groups on counts of repeat victimization using survey and criminal justice measures of abuse. The table reveals interesting patterns. People who only received the public education intervention do not seem to differ from people in the control group. On the other hand, people in the home visit group fare worse than people in the control group. In addition, people who received both treatments seem to be the ones that suffer more from repeat victimization. These effects are most pronounced at six months after sample intake and tend to diminish at the 12-month follow-up point.

Nevertheless, there are important limitations in examining the means. First, we know that there are significant differences between the experimental and the control group on two variables that might be associated with any of the outcome variables (ethnicity and gender of abuser). Therefore, a comparison between the experimental and the control group on those outcome measures without a statistical control for those differences is equivocal. In addition, many of these measures do not follow a normal distribution. Therefore, we ran multivariate models controlling for

TABLE III. MEANS AND STANDARD DEVIATIONS: REPEAT VICTIMIZATION				
	None	Public Education	Home Visit	Both (PE+HV)
Total abuse- 6-month survey	5.87 (12.63)	3.18 (7.11)	4.61 (10.92)	12.63 (25.96)
Total abuse- 12-month survey	5.36 (8.67)	4.07 (8.94)	3.66 (7.62)	8.58 (23.32)
Physical abuse- 6-month survey	1.45 (4.62)	0.34 (1.37)	1.15 (4.47)	4.53 (12.34)
Physical abuse- 12-month survey	0.53 (1.94)	0.10 (0.78)	0.39 (1.89)	2.86 (11.13)
Psychological abuse- 6-month survey	3.55 (6.96)	2.41 (5.60)	2.86 (6.87)	6.88 (13.46)
Psychological abuse- 12-month survey	5.18 (9.41)	3.11 (7.32)	2.69 (6.11)	5.44 (12.55)
Police data- month 1 to 6	0.32 (0.79)	0.54 (0.99)	0.84 (1.45)	0.68 (1.22)
Police data- month 6 to 12	0.22 (0.55)	0.28 (0.67)	0.30 (0.83)	0.29 (0.74)
Police data- month 1 to 12	0.55 (1.10)	0.83 (1.37)	1.15 (1.84)	0.97 (1.52)

ethnicity and gender of abuser. We examined the comparative effects of the treatments at both 6 and 12 months upon frequency of abuse reports with an over dispersed Poisson multiple regression model. In addition, we modeled the time to the first abuse report made to the police using Cox regression. Cox regression examines differences between groups in time to failure, viz. a new report of abuse.

Over-dispersed Poisson model Although count variables are often treated as though they are continuous, the use of the linear regression model for count outcomes can result in inefficient, inconsistent, and biased estimates. Fortunately, there are a variety of models that deal explicitly with characteristics of count outcomes. The Poisson regression model is the most basic model. However, this model has the defining characteristic that the conditional mean of the outcome is equal to the conditional variance. In practice, the conditional variance often exceeds the conditional mean, this is called over dispersion . An examination of the deviance and Pearson's chi-square of our preliminary models showed that we have to deal with over dispersion. When this happens an alternative is to employ a negative binomial regression or an over dispersed Poisson regression model (Long, 1997;). In many situations, the over dispersed Poisson regression model represent a good alternative. For logistical reasons, we decided to use an over dispersed Poisson

regression approach. We used PROC GENMOD to fit these models. PROC GENMOD is the SAS procedure to fit general linear models. This procedure does not allow researchers to model negative binomial models, but does permit to model over dispersed Poisson regression models. The over dispersed Poisson regression model is simply a Poisson model with an over dispersion parameter. In particular, we use the Pearson Chi-Square divided by degrees of freedom as an estimate of the multiplicative over dispersion factor. PROC GENMOD adjust all statistics appropriately when this parameter is included.

It should be noticed that the function obtained by dividing a log likelihood function for the Poisson distribution by a dispersion parameter is not a legitimate log likelihood function. It is, instead, an example of a quasi-likelihood function. However, most of the asymptotic theory for log likelihood also applies to quasi-likelihoods, which justifies computing standard errors and likelihood ratio statistics using quasi-likelihoods instead of proper log likelihoods (For more details see: McCullagh and Nelder, 1989).

Initially, we analyzed the data ignoring the interaction between them and then we analyzed them taking into account this interaction. To simplify we will be presenting here only the analysis with the interaction effect, as this one turn out to be significant, but it should be mention that the simpler analysis, without the interaction effect, showed similar

patterns with the effects showed by the interaction effect being absorbed by the home visit group on them.

For the analysis of repeat victimization two additional covariates are included in the analysis. These two covariates represent the variables in which the control and experimental group still statistically differed after the randomization process. Although the introduction of covariates in analyzing data from a randomized experiment is unusual and, strictly speaking, is not necessary, this situation is clearly an exception. In addition, statistical controls for other factors tend to improve the precision of the treatment comparisons and correct for any major imbalance in the distribution of these measures across treatments that may have occurred by chance (Armitage, 1996). The results of the analysis are presented in Table 4. Along with an ordinal variable with four levels measuring the different degrees of the intervention, we have included as covariates the ethnicity and the gender of the perpetrator (as there were statistical significant differences between the experimental and the control group on these two variables) and the over dispersion parameter. Results are provided for the different measures of abuse employed at time 1 (6 months after the intervention) and time 2 (12 months after the intervention).

The parameters in counts models can be interpreted in different ways. If we are interested in the expected count, several methods can be used to compute the change in the

TABLE IV. COEFFICIENTS FOR THE OVERDISPERSED MULTIPLE POISSON REGRESSION MODELS PREDICTING REPEAT VICTIMIZATION.

	Repeat Calls to the Police 1-6	Repeat Calls to the Police 6-12	Total Abuse Survey 1-6	Total Abuse Survey 6-12	Physic. Abuse Survey 1-6	Physic. Abuse Survey 6-12	Psycho. Abuse Survey 1-6	Psycho. Abuse Survey 6-12
HV & PE	0.67*	0.21	0.76*	0.51	0.96*	2.05*	0.68	0.06
Only HV	0.98**	0.20	-0.25	-0.28	-0.29	0.04	-0.23	-0.60
Only PE	0.45	0.19	-0.85	-0.36	-1.69	-1.27	-0.49	-0.67
Hispan.	-0.51*	-0.59	0.06	-0.24	0.38	-1.32	0.05	-0.09
Male	0.31	0.03	0.25	-0.06	0.94	-0.43	0.01	-0.18

**(alpha level=0.01)
*(alpha level=0.05)

expectation for a change in an independent variable. The simplest way to interpret the results is by using the factor changes in the expected count. The factor change can be computed simply from the parameters in the model. Long (1997) provides a detailed derivation and the mathematical formulas. In our case, for example, the coefficient for HV & PE in the model predicting repeat calls to the police during the six months after the assignment can be interpreted as:

* Being in the combined intervention group (home visit and public education) as opposed to the control group increases the expected number of calls to the police by a factor of 1.95 (= Exp [0.67]), holding all other variables constant.

Or, if we want to interpret the coefficient for the Only HV group in this same model, we can say:

* Being in the home visit only group increases the expected number of calls to the police by a factor of 2.66 (= Exp [0.98]), holding all other variables constant.

The analyses confirm what the comparisons of the means suggested. Nevertheless, statistically controlling for additional covariates reduces some of the differences across the groups. Consistently, we find that the victims who received both treatments fare worse than victims in the control group. This effect is significant when we focus on 6-month repeat calls to the police, the total abuse survey measure, and the physical abuse survey measure. Also at 6

months after sample intake, cases that were assigned to home visits alone differed significantly from cases in the control group. At 12 months after sample intake, the difference between the group receiving both treatments and the control group remained significant for the physical abuse measure. No significant differences were evident between groups on measures of repeat calls to the police, total abuse from victim surveys, and psychological abuse from the victim surveys.

Cox Regression Models We complemented this analysis with a Cox regression model to examine the time to the first repeat victimization after the initial call. This model allows us to include a temporal dimension to the analysis. The results can be observed in Table V.

The likelihood-ratio test, the score test and the Wald test are all over 13 with 5 degrees of freedom, leading to p values below 0.05. We conclude that at least one of the coefficients is not 0. Table 5 portrays the risk ratios and their significance. Receiving the home visit only and receiving both, public education and the home visit, are the only significant covariates.

The risk ratio is just the e**beta. For indicator (dummy) variables with values of 1 and 0, we can interpret the risk ratio as the ratio of the estimated hazard for those with a value of 0 (controlling for other covariates). The estimated

Table V. Hazard rations and its significance from a Cox multiple regression model predicting time to new complaint to the police				
Public education	Home Visit	Both (PE+HV)	Ethnicity	Gender
1.26	2.05**	1.78*	1.36	0.76

** (alpha level=0.01)

* (alpha level=0.05)

risk factor for people who received both the public education and the home visit is 1.78, and for the people who received the home visit is 2.05. In other words, the hazard of calling the police approximately doubles for participants who received home visits only or both home visit and public education, relative to persos who received neither intervention.

Explanations of the Increased Reports of Abuse

The findings with respect to renewed incidents of abuse are perplexing: An intervention intended to reduce repeat abuse seems to have promoted it instead. In searching for an explanation of the findings, we examined differences in respondents' attitudes toward the police. If victims who received one or both interventions expressed more confidence in the police, then that might explain why they were more likely to call the police when future abuse occurred. (Of course, it still would not explain why victims who received both interventions reported more abuse on the research surveys.)

We had two variables in the survey database that provided approximations of confidence in the police. The first of the items asked victims if they would call the police if an abusive incident happened in the future. However, responses to this question did not show enough variation to analyze according to whether households did or did not receive an intervention: Across all treatments, 19 in 20 victims (n=11)

said that they would call the police again, and there was negligible variation by treatment assigned.

The other item that measured confidence in the police showed greater variation. Satisfaction with the police handling of the trigger incident was rated on a three-point scale from unsatisfied to very satisfied. The overall sample mean of 1.67 indicates a fair (but not overwhelming) degree of satisfaction with the response. However, there was little variation by group, with the range in means going from 1.61 (sd=0.87) for the home visit group to 1.72 for the public education group (sd=1.07).

CONCLUSIONS

We were frankly surprised by the outcome of our experiment. We had expected that the major effect of both public education and home visit interventions would be increased confidence in the police. That would manifest itself -- in the short run -- in a greater propensity to call the police in response to abuse among persons who had received the interventions. At that early stage we expected no differences between groups on measures of abuse reported by victims to research interviewers. This was true because it was thought that more frequent police intervention would only in the long run lead to a decrease in abuse reported by victims to research interviewers. In other words, a summary of the model is as follows:

Intervention	==>	Increased calls to police (short-term)	==> Reduced abuse (long-term)

As expected, we found that, among people who received home visits or who received both interventions, calls to the police occurred sooner and more frequently than among other victims in the sample. But contrary to expectation, those who

received both interventions were more likely as well to report more physical abuse to research interviewers.

What sense are we to make of this finding? The three possible explanations are (a) that persons who received both interventions did not suffer more abuse, but had become more sensitized to abuse, (b) that persons who received both interventions were more willing to report abuse both to police and to research interviewers, or (c) that receiving both interventions caused more abuse to occur.

The first two explanations are appealing because they are more benign than the third. But the first explanation seems unlikely. If that explanation were true, then it would stand to reason that victims who received both interventions (since they were more sensitized to abuse) would have scored higher on the measure of elder abuse knowledge than other victims in the sample. However, there is no evidence that such is the case: There were virtually no differences between any of the treatment conditions on the knowledge measure at either six or twelve months. Also, if the sensitization hypothesis were true, we would expect to have seen a larger differentiation between the treatments on the psychological abuse measure than on the physical abuse measure. In other words, psychological abuse is a more ambiguous form of abuse than physical abuse. If sensitization were the issue, the increased sensitivity ought to have been observed primarily in the psychological

abuse measure rather than in the physical abuse measure. But that is the opposite of what we observed.

The second hypothesis -- that persons who received both interventions were more willing to report abuse both to police and to research interviewers -- is harder to refute. Accoding to this hypothesis, the interventions, which were associated with both the police and Victim Services, increased victims' confidence in both organizations. Those who had received the interventions were more likely to report them to the police and to research interviewers who were affiliated with Victim Services. This explanation has the appealing implication that the interventions in some sense provided an antidote to the secretive nature of elder abuse.

How plausible is the third explanation -- that receipt of both interventions increased actual abuse? We had been assuming that the effects of the interventions would be to suppress abusive behavior by making abusers more circumspect. Is it possible instead that the combined interventions may have incited abusers? We do not have direct evidence on this point since we did not interview abusers. There is some precedence for such an outcome from the work of Ford (1991). He reports that batterers who were prosecuted to conviction were significantly angrier than men whose cases were diverted or dropped.

Also, an increase in abuse post-intervention seems plausible when we consider the nature of relationships in

elder abuse cases. In domestic violence cases that come to the attention of authorities, many victims ultimately leave the abuser. However, two-thirds of the abusers in our sample were children or grandchildren. In elder abuse, victims are often dependent on the abuser in multiple ways and, in any event, kinship ties are hard to sever entirely. Thus, elder abuse victims are, in some respects, more "stuck: than victims of spousal abuse. If abusers of elderly relatives become angered by attempts to intervene, there may be no good escape for the victim.

If it is true that the interventions done in combination have the potential to bring about more abuse, then what does that imply about how these programs ought to be conducted? One solution would be to discontinue these kinds of programs. But that isn't a satisfying alternative because we have a strong belief as a society that we are obligated to intervene on the behalf of victims. Moreover, while our data extend over a twelve month period, they do not speak to the ultimate resolutions of these abusive relationships. It is possible, for example, that home visits and public education bring issues of abuse to a head (and to a resolution) sooner because they exacerbate problems that otherwise would have continued to fester slowly.

Based on our results, it seems prudent for advocates who work to prevent repeat victimization to develop ways to assess client households to gauge the potential for future abuse by

the offender. In cases where that potential is high, victims need to be made aware of the possible consequences of remaining with the abuser. Victims need to be offered plans that separate them from the abuser and those who are willing to make significant life changes should be offered assistance in implementing those plans.

This research has raised serious questions that deserve to be followed up on by future research. What is it about these interventions that apparently results in greater abusive events? The best way to try to understand this paradox is to do a similar experiment and to interview both abusers and victims about how the interventions have affected the abusers. That is, how are their attitudes toward victims, their emotional states, and their motivation to commit abuse impacted by the interventions. This is research that would be difficult to do well because the abusers may prove difficult to locate, may be unwilling to be interviewed, and would have strong incentives not to give honest responses to all questions. Yet it is important that this research be conducted in order to provide the most effective and responsible service possible to elder abuse victims.

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