The Effect of Arrest On Wife Assault Recidivism: Controlling for Pre-Arrest Risk
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THE EFFECT OF ARREST ON WIFE ASSAULT RECIDIVISM

Controlling for Pre-Arrest Risk

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Prior research on the effect of arrest on wife assault recidivism had equivocal results and mixed reception. Arrest is not always used in wife assault cases, and several studies suggest that arrest is influenced by incident severity rather than risk of recidivism. The present study examined the effect of arrest controlling for pre-arrest actuarial risk of recidivism, which was measured retrospectively and independently of arrest decision using the Ontario Domestic Assault Risk Assessment. In an archival study of 522 wife assault incidents with police attending, arrest was associated with pre-arrest risk for recidivism and with victim injury, incident severity, and other sample characteristics. In multivariate regression and survival analyses, arrest had no overall effect on recidivism but a small beneficial effect in lower risk cases, mostly in terms of a delayed time until recidivism. Arrest of higher risk cases could be increased by police use of a validated tool for risk assessment.

Keywords: arrest; decisions; domestic violence; recidivism; risk assessment

Arrest (lawful apprehension of a person by a police officer based on a legal standard of belief that the person has committed a crime) is a discretionary power of the police. Because political pressure from battered women and their advocates emphasized the fact that wife assault is a crime, the police have often been criticized for failing to arrest the assailants (see reviews by Hilton, 1989, and more recently, Buzawa & Buzawa, 2003) and for disproportionately arresting men of lower social status (e.g., the poor, ethnic minorities; Avakame & Fyfe, 2001; Buzawa & Buzawa, 1993; Ferraro & Pope, 1993). In studies using various methods, the likelihood of arrest in cases of wife assault was consistently increased by the perpetrator’s violence history, restraining order violations, substance abuse, threats, and use...
of weapons (Bachman & Coker, 1995; Buzawa, 1982; Buzawa & Austin, 1993; Gondolf & McFerron, 1989; Kane, 2000; Robinson & Chandek, 2000; see also Cramer, 1999), at least when the assailant was present when police arrived (Hall, 2005). Such variables are intuitively associated with risk of future violence, and all appear on at least one published formal assessment for the risk of domestic assault (Berk, He, & Sorenson, 2005; Campbell, 1986, 1995; Hilton et al., 2004; Kropp & Hart, 2000; Williams & Houghton, 2004; see review by Hilton & Harris, 2005).

Two decades ago, commentators demanded mandatory arrest for domestic violence to counter inconsistent arrest procedures and to reduce recidivism (e.g., Sherman & Berk, 1984). Mandatory arrest policies, however, do not ensure that all suspects are arrested (Buzawa & Buzawa, 1996; Ho, 2000). One of the most successful attempts to increase the rate of arrest for domestic assault yielded an increase from 65% to 89%, but the change took several years and did not reach full compliance (Jaffe, Hastings, Reitzel, & Austin, 1993). Arrest has been just as strongly criticized as a possible cause of increased violence by some perpetrators (e.g., Dugan, Nagin, & Rosenfeld, 2003; Sherman et al., 1992). In the first attempt to assess its actual effects, a randomized controlled study of arrest on wife assault recidivism reported that arrest (or “suspects targeted for arrest,” according to Sherman & Berk, 1984, p. 264) was significantly associated with reduced recidivism (13% had a new police report of domestic violence) compared with separation (“suspects to be sent out of the residence for 8 hours”; 26% had a new police report). A third intervention (“suspects to receive advice,” in Sherman & Berk, 1984, p. 264) yielded an intermediate effect. Similar results were obtained for victim reports of new assaults.

Five attempts to replicate the Sherman and Berk (1984) study all failed to do so to varying degrees (e.g., Dunford, Huizinga, & Elliott, 1990; Hirschel, Hutchison, & Dean, 1992) and reported that effects varied as a function of follow-up duration, official reports versus victim reports, and perpetrator characteristics, such as unemployment (Berk, Campbell, Klap, & Western, 1992; Pate & Hamilton, 1992; Sherman et al., 1992). The replications varied in procedures, comparison interventions, follow-up times, and outcome, leading some to comment that firm conclusions about the effects of arrest cannot be drawn (e.g., Garner, 1997; Garner, Fagan, & Maxwell, 1995). Combining data from all five replication attempts, Maxwell, Garner, and Fagan (2001) concluded that arrest slightly reduced recidivism (i.e., violence against the partner or property, verbal threats of violence), but survival curves for arrested versus nonarrested suspects were nearly identical during 1,000 days of follow-up. After a flurry of empirical interest in the 1980s, the effects of arrest on wife assault recidivism remain unknown.

In the absence of completely random assignment, a major difficulty in evaluating the effects of arrest is the lack of knowledge about how arrest varies as a function of perpetrators’ preexisting risk of recidivism. It would be especially difficult to demonstrate a positive effect of arrest if police tended to arrest higher risk perpetrators, because such a tendency would mean an initial positive association between arrest and recidivism. (Similar difficulties have been noted in the evaluation of the effects of prosecution, as seen in Davis, Smith, & Nickles, 1998.) Some predictors of arrest are also known to be predictors of wife assault recidivism (e.g., substance abuse, threats of violence; Hilton & Harris, 2005). Indeed, Schmidt and Sherman (1993) asserted that police officers have some informal ability to predict which perpetrators are more likely to recidivate; they only lack formal tools to systematize this ability and guide their decisions.

Random controlled trials are the gold standard method for evaluating interventions, but they are hard to implement when evaluating arrest because some legal and ethical considerations...
make them unfeasible (e.g., withholding arrest in cases of victim injury). In the 1980s arrest studies, police officers frequently deviated from the random design by arresting suspects in as many as 20% of cases assigned to other interventions largely because of the severity of the incident (e.g., Sherman & Berk, 1984). Full understanding of the arrest decision and its effects is likely to depend on nonrandom designs.

A central principle of criminal justice intervention, regardless of evaluation design, is that offenders vary in their pre-intervention risk of recidivism. Interventions applied to low-risk offenders are less cost effective and have the potential to do harm by increasing recidivism (Andrews & Bonta, 1994; Andrews et al., 1990). A similar deleterious effect for arrest in cases of wife assault, especially when used in low-risk cases, has not been ruled out by previous research. An adequate evaluation of the effect of arrest on wife assault recidivism, therefore, requires an objective measure of pre-arrest risk, preferably independent of variables associated with arrest. For example, perpetrator unemployment has been reported to increase the chances of arrest, interact with the effects of arrest, and predict violent recidivism (e.g., Pate & Hamilton, 1992; Sherman et al., 1992; Tauchen & Witte, 1994; Wooldredge & Thistlethwaite, 2002). On the other hand, most research indicates that police are more likely to arrest domestic violence perpetrators when the victim has been injured (Robinson & Chandek, 2000; but see Gondolf & McFerron, 1989), whereas victim injury is not clearly associated with the risk of recidivism (Cattaneo & Goodman, 2005; Hilton et al., 2004). Recently developed formal domestic-violence-risk assessments make it possible to control for pre-intervention risk when evaluating the effects of arrest on wife assault recidivism.

In the present study, we examined the association between arrest and wife assault recidivism, controlling for pre-arrest risk of recidivism with an actuarial risk assessment for wife assault recidivism. The Ontario Domestic Assault Risk Assessment (ODARA; Hilton et al., 2004) was developed for use by police officers to improve accuracy of risk assessment and to aid communication among criminal justice and other agencies responding to wife assault. The ODARA has 13 yes-or-no items concerning the perpetrator’s history of substance abuse, violent and criminal behavior (police record for domestic assault, police record for nondomestic assault, prior correctional sentence, failure on conditional release, violence outside the home, domestic assault during pregnancy), details of the most recent assault (physical confinement, threats of harm, victim feared future assaults), and the victim’s circumstances (number of children, children from a prior relationship, barriers to support). An actuarial assessment, in contrast to those whose items are selected from reviews of the literature or expert consultation, contains items selected by an empirical analysis of the magnitude of each item’s association with subsequent assaults in a specific population; in this case, wife assaulters known to police. In addition, in the construction of the ODARA, items were subjected to an analysis of incremental validity so that, after consideration of ODARA score, none of the more than 60 additional study variables made any additional contribution to the prediction of the outcome. Actuarial methods are the basis of the systems used by the insurance industry and physicians to calculate an individual’s accidents or health problems.

In its construction, using 589 cases followed up over an average of 5 years, ODARA score significantly predicted wife assault recidivism, \( r = .43, p < .001 \), corresponding to a large effect size \( d = 1.1 \) and an ROC area = .77 (Hilton et al., 2004). A perpetrator’s ODARA score indicates the likelihood of his recidivism and how he ranks among other known wife assaulters with respect to risk of recidivism. Predictive accuracy was maintained in cross-validation and was significantly better than that of nonactuarial assessments (Hilton et al., 2004). Unemployment, victim injury, weapon use, and other indicators of offense severity and offender...
socioeconomic status were unsuccessful in the multivariate analyses used to construct the ODARA, whereas the 13 items of the ODARA each had incremental value in the prediction of recidivism. Consequently, the ODARA is an objective index of pre-arrest risk of recidivism independent of police intervention. Furthermore, in the construction sample, ODARA score exhausted the empirical ability to assess the pre-intervention risk of recidivism; therefore, this sample can be used to evaluate the independent and additional effect of arrest on recidivism after controlling for pre-arrest risk.

The present study was conducted in a jurisdiction with the presumption of arrest for domestic assault that, nevertheless, had incomplete application of arrest. This setting provided an opportunity to examine whether arrest is more likely in cases at greater risk of future violence (i.e., having a higher ODARA score). We examined pre-arrest actuarial risk of recidivism, arrest decisions, and wife assault recidivism in a sample used to construct the ODARA. The police did not have the ODARA at the time they attended the incidents, but ODARA scores were calculated retrospectively from police records made at the time of the incidents. We asked the following questions:

1. What was the rate of application of arrest for wife assault in a jurisdiction with a policy of presumption of arrest?
2. Was arrest associated with pre-arrest risk of recidivism (i.e., ODARA score) after controlling for the severity of the incident and the socioeconomic status of the offender?
3. Did arrest affect the likelihood of wife assault recidivism?

METHOD

CASES AND PROCEDURE

As part of a larger study on wife assault recidivism (Hilton et al., 2004), we coded information on 589 men identified in police records as perpetrators of an incident involving a physical assault on a current or former wife or common-law wife or a credible threat of death against such a victim with a weapon in her presence. Among these cases, 67 were reported to police after some delay. Police officers went to the scene of the incident in the remaining 522 cases, which were included in the present study whether or not arrest occurred or charges were pursued. As a matter of policy, police officers were required to make a record of every public contact whether or not they believed that an offense occurred, made an arrest, or pursued criminal charges. The reports were compiled in an electronic archive, used by the Ontario Provincial Police (the second-largest police service in Canada) as well as by approximately 50 municipal police services in Ontario, Canada. Criminal history and recidivism data on each case were obtained from the Canadian Police Information Centre Finger Print Service, which records all charges and dispositions in Canada.

Research assistants read all reports pertaining to a domestic incident and included the case only if they were satisfied that an assault meeting the above criteria had actually occurred; questionable cases were rejected. For each case, we selected the eligible incident closest to the end of 1996 as the index assault and coded all information in the report pertaining to this incident, including ODARA items, police response, characteristics of the perpetrator and victim and their relationship, and variables previously associated with arrest decisions, not otherwise included on the ODARA: perpetrator’s violence history, restraining order violations, substance abuse, threats, use of weapons. Because of the jurisdiction’s presumptive arrest policy, victims’ preference for arrest was rarely reported and not included in this study.
VARIABLES

Sample characteristics for the present study are shown in Table 1. Case characteristics are a subset of the variables coded in the larger study (Hilton et al., 2004) and are presented here to characterize the sample, especially regarding variables identified in previous literature as associated with arrest. The ODARA was scored as described by Hilton et al. (2004), and the scoring criteria are available from the first author. Injury caused to any victim was scored on the following 6-point scale: 1 = no injury; 2 = slight injury, no weapon; 3 = slight injury, weapon; 4 = treated in clinic and released; 5 = victim hospitalized at least 1 night; 6 = death (Quinsey, Harris, Rice, & Cormier, 2006). An index incident severity scale was created for this study by assigning one point for each of four variables pertaining to the assault: injury to any victim, any severe violence used, a threat made with a weapon, and a weapon used on any victim. The use of severe physical violence included any of the following: used a knife or gun, punched, choked, slammed against wall, beat up, burned or scalded, kicked, or other severely violent act (drawn from the revised Conflict Tactics Scale; Straus, Hamby, McCoy, & Sugarman, 1996). Police officers did not have ODARA scores; this tool was created later using the sample data. In the present sample of 522 cases, ODARA score yielded a statistically significant correlation with wife assault recidivism, $r = .41$, $p < .001$.

We coded arrest as the perpetrator being arrested at the scene of the offense or, much more rarely, the police laying criminal charges or obtaining an arrest warrant without detaining the perpetrator. Any subsequent report of assault against a female domestic partner recorded in the police archives during an average follow-up of 4.9 years was considered wife assault recidivism (as in Hilton et al., 2004). We also counted the number of incidents meeting the criteria for wife assault recidivism, the total of the injury scores for all of the wife assault recidivism incidents (using the same victim injury scale described in the previous paragraph), the number of recidivistic criminal charges incurred, and a total score for all recidivistic incidents on the Cormier-Lang Criminal History (CLCH) score, a validated standard measure of the extent and severity of criminal conduct (Quinsey et al., 2006).

Independent coding of all variables, including the components of the offense severity scale, achieved an interrater reliability, assessed with Pearson correlation coefficient, of .80 (for continuous measures) or kappa coefficient of .70 (for categorical measures) in a randomly selected sample of 30 cases. Interrater reliability in 24 cases similarly coded exceeded .90 for the ODARA and recidivism, coded blind to each other (Hilton et al., 2004).

RESULTS

PREVALENCE OF ARREST

More than half (56%) of the 522 perpetrators were arrested, and 30% were specifically noted to have been detained until a bail hearing. Other police responses (not necessarily mutually exclusive) were giving advice (17%; e.g., advise the victim to seek legal help, counseling, or shelter), mediation (11%), seizing weapons (5%), providing information (7%), issuing a warning (3%), or doing nothing (2%). In a few cases, officers transported the perpetrator to another location (2%), took the victim to hospital or shelter (2%), or charged the female partner (2%).
As shown by confidence intervals (see Table 1), men arrested or charged differed in many respects from men not arrested or charged. In particular, they exhibited greater pre-arrest risk of recidivism, as indicated by ODARA score, and had higher scores on the victim injury and severity scales, although victim injury at the index incident was a poor index of the risk of wife assault recidivism (see Table 1). As also shown in Table 1, several variables associated in previous literature with arrest also distinguished arrested and not-arrested men (prior domestic violence, substance abuse, threats, use of weapons) but not other variables (prior nondomestic violence, restraining order violations).

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**ARREST, RISK, AND RECIDIVISM**

There was a statistically significant positive association between arrest and wife assault recidivism, \( r(520) = .14, p < .01 \). In a binary logistic regression to predict recidivism using ODARA score and arrest, however, only ODARA score made a statistically significant contribution, odds ratio = 1.56, Wald statistic \((df = 1) = 64.89, p < .001\), model Nagelkerke \(R^2 = .22\); arrest had no statistically significant independent or incremental effect, Wald statistic < 1.

The same results (large effect of ODARA, no effect of arrest) were obtained in least squares multiple regression analyses with the continuous measures of recidivism: victim injury caused in recidivism incidents, multiple \( R = .34, F(2, 519) = 33.71, p < .001\), ODARA \(\beta = .35, p < .001\), arrest \(\beta = -.06, ns\); number of charges at recidivism incidents, multiple...
\[ R = .35, F(2, 519) = 36.24, p < .001, \text{ODARA } \beta = .35, p < .001, \text{arrest } \beta = .01, \text{ns}; \text{and the total Cormier-Lang score for charges at recidivism, multiple } R = .37, F(2, 519) = 39.90, p < .001, \text{ODARA } \beta = .37, p < .001, \text{arrest } \beta = -.01, \text{ns.} \] Thus, the positive association between arrest and wife assault recidivism could be attributable to officers tending to arrest perpetrators who were of higher pre-arrest risk.

A final continuous measure of recidivism, time at risk, was examined in a Kaplan-Meier survival analysis. Survival analysis permits the examination of the effect of arrest over time, and it is a particularly useful statistical approach when cases differ in their follow-up time. We measured the follow-up time for each case from the date of the index assault to the date of the first incident of wife assault recidivism (for recidivists) or the date that the police archives were interrogated (for nonrecidivists). We then subtracted the estimated time spent in custody as a result of the index assault or other offenses to derive the time at risk. The longer a case is at risk without recidivism, the longer that case is said to “survive.” Based on the results of multivariate regression analyses, we chose only arrest and pre-arrest risk (using a median split ODARA score, 3 or lower versus greater than 3). Kaplan-Meier survival curves for wife assault recidivism for the four subgroups thus defined are shown in Figure 1, which suggests the presence of a statistical interaction. Cases of higher pre-arrest risk exhibited more and faster recidivism regardless of arrest; whereas, among cases of lower pre-arrest risk (ODARA score \( \leq 3 \)), arrest appeared to be associated with recidivism, especially after 1,000 days. However, the median splits did not render the cases represented by the upper two functions in Figure 1 (ODARA score \( \leq 3 \)) equal in pre-arrest risk; those arrested had higher ODARA scores, means = 1.45 (SD = 1.03) versus 1.93 (SD = 1.02), \( t(df = 354) = 4.42, p < .001 \).

Kaplan-Meier survival analysis is suitable for a minimal number of dichotomous variables. To examine the continuous ODARA score and to evaluate the independent contribution of pre-arrest risk of wife assault recidivism and arrest in these temporal data, we conducted a Cox proportional hazards regression analysis of wife assault recidivism. Arrest made no statistically significant independent contribution, whereas the ODARA score made a statistically significant contribution, Wald statistic \( (df = 1) = 96.35, p < .001 \). When the interaction term (i.e., the product of arrest and ODARA score) was also tested, its effects were also significant, Wald statistics \( (df = 1) = 39.92 \) and 16.13, respectively, \( p < .001 \). In the presence of the interaction term, arrest yielded a statistically significant inverse effect on recidivism, Wald statistic \( (df = 1) = 13.98, p < .001, \beta = -1.3 \).

The analyses all indicated a large effect of pre-arrest risk on the likelihood of recidivism and on the likelihood of arrest but no evidence, at any level of risk, that the decision to arrest independently contributed to the probability of recidivism. The Kaplan-Meier survival curves and the significant inverse effect of arrest when the interaction term was included in the Cox proportional hazards analysis suggested that, among relatively low-risk cases and independent of the effects of pre-arrest risk, arrest might have delayed wife assault recidivism.

**DISCUSSION**

In a nonexperimental study of 522 cases of wife assault incidents, police officers arrested just more than half of the perpetrators. Arrest was associated with pre-arrest, actuarial risk of wife assault recidivism, and independently with the seriousness of the offense. Arrested perpetrators were more likely to recidivate, but this effect was entirely attributable to pre-arrest differences in risk. Although the risk principle of offender management discourages
intervention in the lowest risk cases because of the potential to increase recidivism, the present data yielded no evidence that arrest for wife assault increased recidivism at any level of risk. In part, this might be attributed to the tendency for the officers to arrest higher risk cases even though they did not have actuarial risk information when they made their arrest decisions. Survival analyses suggested that arrest might even have delayed recidivism among relatively low-risk cases.

These results are of interest because they indicate that the police officers, based on their informal evaluations, tended to make decisions at least somewhat associated with perpetrators’ actual likelihood of recidivism. This finding might not be surprising given that previous literature has shown that arrest decisions are related to several variables that are also related to recidivism. Officers’ apparent predictive skill contrasts with the notoriously poor predictive accuracy shown by mental health professionals’ judgments of violence risk (e.g., Ægisdóttir et al., 2006; Hilton, Harris, & Rice, 2006). Officers’ arrest decisions were, however, also strongly related to the seriousness of the offense, as indexed by victim injury and the severity of the original assault, even though these variables were weakly related to recidivism. Despite the fact that the jurisdiction had an official presumptive arrest policy, police officers arrested only about half of the perpetrators. It is possible that some relatively high-risk perpetrators were not arrested or detained because the offense did not seem sufficiently serious to the officers.

Previous attempts to discern the effects of arrest on wife assault recidivism, even though attempting random assignment, have been unable to yield firm conclusions. Equivocal results led to doubts as to the appropriateness of arrest for wife assault, especially for men who have little to lose by being arrested (i.e., the unemployed; e.g., Pate & Hamilton, 1992; Sherman, 1992). The present study suggests that police officers arrested men (unemployment notwithstanding) who were more likely to recidivate. This finding is similar to a report that probation officers’ decisions about classifying wife assailters, based partly on police assessments, were correlated with recidivism (Shepard, Falk, & Elliott, 2002). In that study, also similar to the
present study, predictive accuracy was attenuated because the classification conflated the risk of recidivism with offense severity.

A limitation of the present study is that it was based entirely on police reports and criminal records and did not obtain reports of recidivism from victims. Much wife assault goes unreported, and there are outcomes in addition to recidivism that might be important in evaluating the effects of arrest (e.g., Miller, 2003). However, abused women are most likely to call the police following severe assaults (Bonomi, Holt, Martin, & Thompson, 2006), and the criminal justice system is of necessity primarily concerned with behavior that comes to the attention of police. Another limitation is that the present study was not experimental. When Davis et al. (1998) reported no effect of prosecution on domestic violence recidivism, they noted that nonexperimental studies leave open the possibility that criminal justice intervention is applied to the highest risk cases and has beneficial effects on their recidivism in such a way that one effect masks the other. The present study evaluated risk and intervention independently by measuring pre-arrest risk of recidivism retrospectively using only information pertaining to events prior to the arrest decision. Because the present sample was used to optimize the pre-arrest statistical prediction of wife assault recidivism (in the construction of the ODARA), there was little variability in recidivism not already subsumed by the actuarial, pre-arrest ODARA scores. Thus, it was reasonable to conclude that the absence of an incremental effect of arrest meant that arrest per se was unlikely to have caused an increase in recidivism.

The police officers’ arrest decisions in the present study, although somewhat related to pre-arrest risk, could not have been informed by the actuarial scores because the ODARA was developed afterward. Research in other forensic contexts, however, reveals that not all decision makers make effective use of objective risk assessments (e.g., Hilton & Simmons, 2001; Krauss, 2004). Future research might explore the best means to implement objective risk assessment in criminal justice contexts and how users should be selected and trained.

The present results suggest that, on the whole, police officers arrested higher risk perpetrators and that there was a small beneficial effect of arrest, possibly in delaying recidivism. We cautiously suggest that the former effect will be strengthened by providing police officers with an actuarial tool (such as the ODARA; Hilton et al., 2004) to assess risk. We cannot say how much of the latter effect is attributable to arrest per se or to such other interventions as custody and prosecution. Future research might evaluate the effects of postarrest custody, various approaches to prosecution, and types of conditional release supervision, all informed by the broader literature on the effectiveness of criminal justice intervention (Hilton & Harris, in press; Williams, 2005). As jurisdictions begin to introduce formal risk assessments into police investigative duties, true experimental research might become more feasible.

NOTE

1. Recently, a pilot implementation of the Ontario Domestic Assault Risk Assessment (ODARA), by police services in Canada’s capital region permitted evaluation of decisions by officers who actually scored the ODARA and could rely on it. The Ontario Ministry of the Attorney General gave preliminary field data collected for the pilot implementation to us for analysis. Although these data are of unknown reliability, postarrest detention (used in 160 of these 372 new cases) was significantly associated with ODARA score, \( r(370) = .52, p < .001 \), and ODARA score was also associated with subsequent denial of bail, \( r(171) = .22, p < .01 \). These preliminary results imply larger differences (between those detained and released) than those in the police arrest decisions in the present research, suggesting that actually having the actuarial risk assessment scores led to improved risk-related decisions.
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