This study evaluated the effectiveness of a project designed to enhance coordinated community responses by examining recidivism rates. Project enhancements included expanded danger assessment and information sharing among criminal justice practitioners and advocates. When compared to a baseline period, results indicated that offenders had significantly lower rates of recidivism after the project was implemented. There were steady declines in the number of recidivists over 3 years of the project, beginning in the pilot year and decreasing significantly during the intervention years. Logistic regression procedures found two variables that were significantly related to offenders not having recidivated during all years of the study: the offender having been court mandated to attend the Men's Nonviolence Program and the offender having completed the program. There was evidence to support the use by probation officers of a danger assessment tool to predict recidivism.

Enhancing Coordinated Community Responses to Reduce Recidivism in Cases of Domestic Violence

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Coordinated community responses are increasingly being emphasized as necessary for a comprehensive systemic approach to addressing domestic violence. Although community models vary, coordination typically involves police, prosecutors, probation officers, battered women's advocates, counselors, and judges in developing and implementing polices and procedures that improve interagency coordination and lead to more uniform responses to domestic violence cases. Components of a coordinated community response often include the following: pro-arrest or mandatory arrest policies, follow-

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Authors' Note: Minnesota Program Development, Inc., contributed to the development and implementation of this research project. Information about danger assessment tools and the sentencing recommendation matrix can be obtained by contacting Minnesota Program Development, Inc., 202 E. Superior St., Duluth, MN 55802. The research was made possible through a grant from the Centers for Disease Control and Prevention (CDC), U.S. Department of Health and Human Services (Grant U50/ccu511327). The research and interpretations are the sole responsibility of the authors and not necessarily endorsed by the CDC nor representative of the views, opinions, or policies of the CDC and its staff.

JOURNAL OF INTERPERSONAL VIOLENCE, Vol. 17 No. 5, May 2002 551-569

up support and advocacy for victims, aggressive and prompt prosecution, active monitoring of offender compliance with probation conditions, court-mandated participation in batterer intervention programs, strengthening of civil remedies, and monitoring of the system-wide response to domestic violence cases (Shepard, 1999).

The city of Duluth, Minnesota, was one of the first communities to develop a coordinated community response through the work of the Domestic Abuse Intervention Project (DAIP), which was initiated in 1980. This community-based reform project gained national recognition for successfully negotiating agreements with key criminal justice agencies to coordinate their interventions through a series of written policies and protocols that limited individual discretion and required standard responses. The project's most well-known accomplishments have been its work with the Duluth Police Department to develop a mandatory arrest policy in the early 1980s and the development of an educational curriculum for batterers that focuses on power and control (Pence & Shepard, 1999). However, the core of the DAIP has always been focused on institutional change to effectively coordinate community responses to domestic violence. The philosophy has been that communities, rather than individuals, must be responsible for holding abusers accountable for their violence and for ensuring the safety of victims.

Most studies of domestic violence interventions have focused on individual components of coordinated intervention (e.g., arrest, batterer intervention, use of restraining orders), rather than on a combination of interventions that are part of a coordinated effort (Shepard, 1999). Initial studies of community projects that focused on interagency coordination and the implementation of uniform policies and procedures demonstrated increases in the rates of arrest for domestic violence, successful prosecutions, and court-ordered referrals to batterer intervention programs (Gamache, Edleson, & Schock, 1988; Pence, 1985).

Whether coordination efforts can be successful over the long term in reducing domestic violence is more difficult to determine, although there is evidence to suggest that coordinated interventions do result in improved outcomes. Syers and Edleson (1992) collected case information immediately after arrest and at 6- and 12-month follow-up periods. The least repeat violence was found among men who were arrested and ordered to treatment, followed by men who were arrested but not ordered to treatment, with the highest amount of violence found among men who were not arrested. Another study of recidivism rates in a community that adopted policies and procedures to coordinate its response found that arrest by police prior to a coordinated response led to more abuse but served as a deterrent after a coordinated response was initiated (Steinman, 1990). Tolman and Weisz (1995) found

that arrest was related to lower rates of recidivism in a community that employed a domestic violence protocol that included a pro-arrest policy, proactive prosecution, victim advocacy, and sentencing disposition guidelines that included mandated batterer treatment. However, a more recent study of an integrated system-wide approach to domestic violence that includes specialized criminal justice units and court dockets found that recidivism rates remained high despite aggressive enforcement (Buzawa, Hotaling, Klein, & Byrne 1999).

Although the previous studies focused on single communities, a recent study compared batterer intervention systems in four geographically distributed cities (Gondolf, 1999). Although the focus in this study was not on the coordinated response, there were components of such a response in each of the communities studied. The batterer intervention systems varied in terms of court linkage (pretrial or postconviction court referral procedures), program variation, and the extent of services of offered. The majority of the men (82%) were court mandated to participate in the batterer intervention programs. There were no significant differences across the four sites in terms of reassault rates, the portion of men making threats, or victim quality of life. However, the longest, most comprehensive site had significantly lower rates of severe reassault when background variables were controlled for. This site (located in Denver, Colorado) had mandatory sentencing to counseling as part of conviction, a 9-month group-counseling program, and offered mental health, chemical dependency, and women's case management services. No significant differences in reassault rates were found across the sites for men who were court referred. Men who had completed a minimum of 3 months of the program had significantly lower reassault rates in the more comprehensive program.

Rates of reoffense have varied in each of these studies, which may be related to different community interventions, unique community characteristics, and the research methodology used. Gondolf's (1999) study of four cities found an average of 32% (range 27%-35%) of women reported that they were reassaulted during a 15-month follow-up period. This rate increased to 42% at a 48-month follow-up (Gondolf, 2001). The outcome data for this study were drawn primarily from phone interviews with partners of the men in the program. Another study that used victim interviews found that 50% of victims reported revictimization during a 1-year follow-up period (Buzawa et al., 1999). Other studies have used criminal justice records to determine recidivism rates. Steinman (1990) reported that 56% of batterers reoffended based on criminal justice records and victim interviews at a 12-month follow-up. In a previous study of the Duluth community that used the longest follow-

up period (5 years), 40% of offenders were identified as recidivists in a review of civil and criminal justice records.

Goodman, Dutton, and Bennett (2000) observed that greater demands on the criminal justice system resulting from institutional reforms and high rates of reoffense have led many practitioners to call for improved methods of assessing danger and risk in domestic violence cases. According to Healey, Smith, and O'Sullivan (1998), "Few jurisdictions have systematic assessment tools based upon an articulated theory of batterer typology" (p. 59). In 1995, the DAIP, under the auspices of Minnesota Program Development, Inc., received a 5-year grant from the Centers for Disease Control and Prevention for a multifaceted community-based demonstration and evaluation project to enhance the coordinated responses to prevent domestic violence against women in Duluth. As part of this project, the Enhanced DAIP (EDAIP) developed methods for criminal justice practitioners and advocates to collect and share risk assessment data, which were used to determine the level of sanctions to be recommended for domestic violence offenders. It was hypothesized that the EDAIP when compared to the DAIP would have lower rates of recidivism by offenders.

METHOD

Population and Sample

The population studied was male domestic violence offenders who entered the DAIP Men's Nonviolence Program. The sample included all men who volunteered or were court ordered to attend the program during 1994, 1996, 1997, and the first 6 months of 1998. Offenders from 1994 provided pre-intervention data and served as a baseline for later comparisons.

Tables 1 and 2 summarize the demographic data available on male offenders and female victims for each year of the study. Only data on race and age were available from agency databases. Data on age and race were examined to determine whether comparison groups were similar in terms of demographics using chi-square and *t*-test procedures. For purposes of analysis, race categories were collapsed into two categories, White and person of color, because of the small numbers in some categories.

Offenders in 1994 were not significantly different in terms of race and age from offenders in 1996, 1997, or 1998. The *p* values of *t* tests for age were .07 (1994-1996), .51 (1994-1997), and .09 (1994-1998). The *p* values of chi-square procedures for race were .19 (1994-1996), .66 (1994-1997), and .07 (1994-1998).Victims in 1994 were not significantly different in terms of race

TABLE 1: Demographic Data on Male Domestic Violence Offenders

	1994 (n = 261)		*1996 (n = 217)*		*1997 (n = 220)*		*1998 (n = 100)*	
Variable	n	%	n	%	n	%	n	%
Age								
Younger than 21	13	5	6	3	9	4	7	7
21-30	116	44	81	37	93	42	31	31
31-40	82	31	85	39	75	34	3	38
41-50	35	13	33	15	38	17	2	21
Older than 50	11	4	12	6	5	2	2	2
Unknown	4	2	0	0	0	0	1	1
Race								
American Indian	32	12	35	16	32	15	17	17
Asian American	1	0	0	0	0	0	2	2
African American	16	6	15	7	14	6	8	8
Hispanic	0	0	3	1	1	1	2	2
White	209	80	159	73	172	78	71	71
Other	3	1	5	2	1	1	0	0

TABLE 2: Demographic Data on Female Domestic Violence Victims

	1994 (n = 261)		*1996 (n = 217)*		*1997 (n = 220)*		*1998 (n = 100)*	
Variable	n	%	n	%	n	%	n	%
Age								
Younger than 21	24	9	20	9	22	10	7	7
21-30	117	45	75	35	82	37	36	36
31-40	62	24	77	36	59	27	30	30
41-50	23	9	30	14	33	15	13	13
Older than 50	10	4	4	2	6	3	2	2
Unknown	25	10	11	5	18	8	12	12
Race								
American Indian	23	9	25	12	33	15	12	12
Asian American	1	0	2	1	0	0	3	3
African American	4	2	7	3	5	2	2	2
Hispanic	0	0	2	1	0	0	0	0
White	227	87	181	83	175	80	82	82
Other	0	0	0	0	1	1	0	0
Unknown	6	2	0	0	6	3	1	1

and age from victims in 1996 and 1998. They were not significantly different in terms of age when compared to 1997 victims, but there were significantly

more women of color among 1997 victims. The *p* values for age were .11 (1994-1996), .21 (1994-1997), and .11 (1994-1998). The *p* values for race were .08 (1994-1996), .03 (1994-1997), and .11 (1994-1998).

Design

A nonequivalent comparison group design was used to compare a pre-intervention period (1994) to a pilot year (1996) and two intervention periods (1997 and 1998). In addition, repeated follow-up measurements were taken for each comparison group. Statistical procedures were used to determine whether other demographic and programmatic variables had an impact on recidivism.

The comparison groups included the following:

1994 male offenders were compared to 1996 male offenders,
1994 male offenders were compared to 1997 male offenders, and
1994 male offenders were compared to offenders from the first 6 months of 1998.

Operational Definitions and Data Collection

DAIP. The DAIP coordinated the intervention of battered women's advocates, police, prosecutors, probation officers, judges, and rehabilitation services. Policies and procedures were developed to hold batterers accountable for their behavior and to enhance the safety of victims. The DAIP monitored cases as they moved through the criminal justice system, to insure that policies and procedures were followed and that individual cases were responded to effectively. Offenders entering the Men's Nonviolence Program during 1994, prior to enhancements to DAIP, served as the 1994 baseline group in the analysis reported here.

EDAIP. The EDAIP expanded the coordinated community response with the use of danger assessment tools, a probation-sentencing matrix, and a computerized monitoring system called the Domestic Abuse Information Network.

A collaborative process involved the researchers, advocates, and criminal justice professionals in developing a list of 25 risk factors that were drawn from the research literature and clinical experience (Elliott & Shepard, 1995). A danger assessment instrument developed by Campbell (1995) was a primary source for the development of the instruments used in this study. The police selected 10 of the 25 risk factors to routinely review as part of a suspect dangerousness assessment to be included in their police reports for later use

by advocates, probation officers, and the courts. Women's advocates conducted a danger assessment by asking about all 25 risk factors and forwarding this information to probation officers conducting pre-sentence investigations. No score was given for the danger assessment instrument, rather this information was to be used by practitioners to guide and inform their interventions.

Probation officers collected more in-depth information to supplement pre-sentence investigations for domestic violence–related offenses. Some of the information used to complete this investigation was drawn from danger assessment information that was collected by on-call advocates and the police. After completing the pre-sentence investigation, probation officers categorized offenders and made sentencing recommendations using a sentencing recommendation matrix developed by the project. The probation officers drew from information collected in the pre-sentence investigation and used their own expertise and discretion to identify the offender as one of the following: Category 1—low level offender with no history of violence and little risk of recidivism, Category 2—batterers who have established patterns of abuse and are considered a moderate risk, Category 3—batterers who have established patterns of abuse and are considered a serious risk and, Category 4—batterers that pose a serious risk to their victims and the community. The sentencing recommendation matrix suggested a combination of safety measures, stayed jail time, probation with conditions, and a batterer intervention program for lower level offenders (Categories 1 and 2) and a combination of these with more sanction-oriented sentencing for higher levels of offenders, such as executed jail time and longer probationary periods (Categories 3 and 4) (Arrowhead Regional Corrections–Duluth, 1997).

In summary, the EDAIP project had several different components:

- Police completed suspect dangerousness assessments and included this information in their police reports.
- Women's advocates collected danger assessment information that was forwarded to probation officers conducting pre-sentence investigations.
- Probation officers collected more in-depth information to supplement pre-sentence investigations for domestic violence–related misdemeanor offenses using danger assessment information provided by advocates and police.
- After completing the pre-sentence investigation, probation officers categorized offenders and made sentencing recommendations using the sentencing recommendation matrix.
- A computerized monitoring system was developed to provide better information about the status of offenders.

Project implementation. Throughout the project, data were collected to monitor the implementation of the EDAIP. The percentage of cases that were

assessed for dangerousness by the police and advocates from the Women's Coalition each year was determined, as was the percentage of cases in which the sentencing matrix was used and the categorization of offenders was documented. Feedback was provided to each group on the extent to which they were meeting EDAIP guidelines.

Recidivism rates. Recidivism rates were determined by collecting data from criminal justice databases for St. Louis County and the Minnesota Bureau of Criminal Apprehension. For 1994, 1996, and 1997 male offenders, data were collected 6, 12, and 18 months after intake. Because of time constraints, only 6- and 12-month follow-up data were available for men who entered the program during the first 6 months of 1998. Three levels of recidivism were identified, with each level requiring a greater level of documentation. Men were identified as recidivists when they fell into one or more of the following categories at the time of follow-up:

1. Investigated: Investigated for a domestic violence–related incident but not charged.
2. Charged: Charged with a domestic violence–related offense or been a respondent in an order for protection (OFP) hearing but not convicted or had an OFP awarded.
3. Convicted: Convicted of an offense related to another domestic violence–related incident or been the respondent where an OFP was awarded.

Control variables. The following variables were included in the statistical analysis: age of victim and offender, race of victim and offender, whether they were court-ordered to attend the batterer program, completion of the program, number of sessions attended, and batterer categorization by probation officers. Data on race and age were the only types of demographic data available from program records. High rates of attrition from batterer intervention programs have frequently been reported as a concern (DeHart, Kennerly, Burke, & Follingstad, 1999). Completion of the program and number of sessions attended were included as control variables to determine whether attrition from the program was related to recidivism. Court-mandating men to participate in batterer intervention programs has been a widely accepted component of a coordinated community response, but there have been conflicting findings regarding the effect of court-mandated treatment on reducing violence (National Research Council, 1996). Whether men were court-mandated to participate in the program was examined to further explore this issue. The batterer categorizations used by probation officers were included as control variables to explore whether the sentencing recom-

mendation matrix was useful in identifying higher risk offenders, which was an important aspect of enhancing the community response.

Data Analysis

The percentage of men who recidivated during each year of the study was determined by identifying whether they fell into one or more of the recidivism categories of investigated, charged, or convicted. Men who had recidivated one or more times were identified as recidivists. The number of men identified as recidivists during 1994 was compared to the number of men who recidivated in 1996 and 1997 using chi-square tests to determine statistical significance.

A chi-square, Fisher's exact test, or *t* test was used to determine if control variables were different for offenders who recidivated and for those who did not. Spearman correlation procedures were used to examine the relationship between recidivism and batterer categories assigned by probation officers and the DAIP. Forward stepwise logistic procedures were then used to determine which set of control variables, if any, discriminated between offenders who recidivated and those who did not. Odds ratios were calculated to estimate the likelihood of recidivism associated with each variable.

RESULTS

The enhanced interventions were not consistently implemented during 1997 and 1998, when the project was to be fully operational. The police documented completed danger assessments in only 37% of the cases in which they intervened. Women's advocates conducted danger assessments during 95% of on-call visits to women after police contacts. Probation officers used the sentencing recommendation matrix with slightly more than half the offenders referred to the Men's Nonviolence Program (55%). Criminal justice practitioners may have used the danger assessment methods more frequently but failed to document this in their records. The new computerized monitoring system also experienced extensive delays in becoming fully operational. Throughout the project, compliance with the use of the danger assessments and sentencing recommendation matrix was routinely monitored, and this information was provided to the agencies involved. Training was provided to community professionals on the use of the tools. Staff from the DAIP met with representatives of the police and probation departments to discuss ways to improve the rate of compliance and documentation. In a survey questionnaire, a majority of probation officers reported being satisfied with the sen-

TABLE 3: Men's Nonviolence Program Data

Variable	*1994* (n = *261)*	*1996* (n = *217)*	*1997* (n = *220)*	*1998* (n = *100)*
Classes attended (mean)	14.3	18.3	16.2	18.7
Completed program	45%	52%	39%	34%
Classes attended by completers (mean)	22.7	32.2	29.5	31.3
Referral source				
Civil court	22%	13%	17%	21%
Criminal court	48%	57%	59%	53%
Both	11%	8%	2%	0%
Volunteer	19%	22%	22%	26%

tencing recommendation matrix and the training they received in using it. Despite these efforts, the interventions continued to be inconsistently implemented.

Table 3 summarizes attendance and referral data from the Men's Nonviolence Program. During 1994 and 1996, men were required to complete 27 class sessions. During 1997 and 1998, this number was increased to 33 sessions. It is apparent from the data below that some men completed the program without having attended the required number of sessions. This is attributed to excused absences approved by program staff for a variety of reasons and, in some cases, because probation requirements had been completed. With the exception of 1996, a majority of men entering the program did not complete it. Men from 1994 and 1996 had a longer period in which to complete the program, which may partially account for their higher completion rates. Attendance data were collected until September of 1999. Some men dropped out of the program but eventually returned and completed the program after further court action. Men who dropped out of the program temporarily but who returned during the time period of the program and completed it were considered to have completed the program. Approximately 20% of the men attended as volunteers.

Recidivism

Recidivism rates. Tables 4, 5, and 6 summarize the data on recidivism rates for each year of the study. As indicated earlier, an offender was identified as a recidivist if he fit into one or more of the recidivism categories (investigated, charged, or convicted). Recidivism rates for 1994 men were

TABLE 4: Comparison of 1994 and 1996 Recidivism Rates

Follow-Up	*1994 (%)*	*1996 (%)*	χ^2	*Probability (one-tail)*
6 months	36	31	1.16	0.14
12 months	46	41	0.98	0.16
18 months	51	46	1.31	0.13

TABLE 5: Comparison of 1994 and 1997 Recidivism Rates

Follow-Up	*1994 (%)*	*1997 (%)*	χ^2	*Probability (one-tail)*
6 months	36	28	3.34	0.04*
12 months	46	39	2.63	0.05*
18 months	51	44	2.51	0.06

*$p \geq .05$.

TABLE 6: Comparison of 1994 and 1998 Recidivism Rates

Follow-Up	*1994 (%)*	*1998 (%)*	χ^2	*Probability (one-tail)*
6 months	36	20	8.58	0.00*
12 months	46	33	4.99	0.02*

*$p \geq .05$.

higher than for 1996, 1997, and 1998 men. These differences were statistically significant for 6- and 12-month follow-ups for 1997 and 1998 offenders. The 1998 recidivism rates may be incomplete because of data entry delays in criminal justice databases. Additional police contacts, which would have labeled a 1998 offender as a recidivist, would have been entered promptly, but complete data on OFPs and the final disposition of cases may not have been available for some cases. Lower recidivism rates for 1998 offenders may be partially accounted for by incomplete data, particularly for those who did not have additional police contact but did have another OFP.

Control Variables

Factor-by-factor analysis including offenders from all years of the study ($N = 798$) found that with one exception the demographic variables were not

TABLE 7: Relationship Between Program Variables and Recidivism at 18 Months

	n	%	χ^2	*Significance*
Court mandated	625	50	15.70	.00
Not court mandated	173	33		
Completed program	350	40	9.77	.00
Not completed program	448	51		

significantly related to recidivism at any of the follow-up periods. Offenders whose victims were White women were less likely to recidivate at 12- (p = .01) and 18- (p = .04) month follow-up periods.

Variables relating to the offender's involvement with the Men's Nonviolence Program were more likely to be related to recidivism than demographic variables. Men who were court-mandated to the program were significantly more likely to have recidivated at 6- (p = .00), 12- (p = .00), and 18- (p = .00) month follow-up periods. Men who did not complete the program were also more likely to recidivate at 6- (p = .02), 12- (p = .00), and 18- (p = .00) month follow-up periods. Table 7 summarizes the data at the 18-month follow up in relation to program completion and court-mandated participation. In regard to the number of sessions attended, t tests found that men who attended fewer group sessions were more likely to recidivate (p = .03) at the 12-month follow-up. This difference approached significance at 6- (p = .06) and 18- (p = .06) month follow-up periods.

Table 8 summarizes the data on the relationship between the batterer categorizations assigned by probation officers and recidivism. The batterer categories were significantly correlated with recidivism at each of the follow-up periods. In general, the lower the batterer category, the less likely the offender was to have recidivated at each of the follow-up periods. The one exception was that Category 4 offenders (rated as the most serious risk) were less likely to recidivate than Category 3 offenders. At the 18-month follow-up period, 10 of the 28 Category 1 offenders (36%) had recidivated, 23 of the 51 Category 2 offenders (45%) had recidivated, 28 of the 44 Category 3 offenders (64%) had recidivated, and 2 of the 4 Category 4 offenders (50%) had recidivated.

Forward logistic procedures including control variables and 1994 to 1996 as an independent variable at the 18-month follow-up resulted in two variables remaining in the final model (see Table 9). Men who had recidivated were more likely to have been court-mandated to attend the program (odds ratio = 3.00, p = .00) and to have failed to completed the men's program (odds

TABLE 8: Relationship Between Battering Categories and Recidivism

	Category 1 (n = 28)		*Category 2 (n = 51)*		*Category 3 (n = 44)*		*Category 4 (n = 4)*		*Spearman Correlation*	*Significance*
	n	%	n	%	n	%	n	%		
6 months	5	18	16	31	20	45	2	50	.20	.01
12 months	8	29	20	39	24	55	2	50	.20	.03
18 months	10	36	23	45	28	64	2	50	.21	.02

NOTE: Category 1 = No battering history; Category 2 = Low level/not escalating; Category 3 = Clear pattern/likely to escalate; Level 4 = High risk of serious harm.

TABLE 9: Logistic Regression: Control Variables and 1994 to 1996 Recidivism at 18 Months

Variable	*Coefficient*	SE	*Significance*	*Odds Ratio*
Court mandated	1.11	0.26	.00	3.00
Program completion	–0.88	0.22	.00	0.41
Constant	–4.38	0.23	.05	

ratio = 0.41, $p = .00$). Using this model, recidivism could be predicted accurately in 46% of cases, and no recidivism could be predicted accurately in 78% of the cases. Overall recidivism could be accurately predicted in 62% of the cases based on this model ($\chi^2 = 27.39$, $df = 2$, $p = .00$). Variables not predicting recidivism were age of the victim, age of the offender, race of the offender, race of the victim, number of group sessions attended, and the year. Older women were more likely to have had partners that recidivated at 6 months, and women of color were more likely to have had partners that recidivated at 12 months, but these variables were not significant at 18 months.

Forward logistic procedures including control variables and 1994 to 1997 as an independent variable at the 18-month follow up resulted in four variables remaining in the final model (see Table 10). Men whose victims were women of color (odds ratio = 1.80, $p = .04$), who were court-mandated to attend the men's program (odds ratio = 2.57, $p = .00$), who did not complete the men's program (odds ratio = 0.54, $p = .00$), and who entered the men's program in 1994 (odds ratio = 0.65, $p = .03$) were significantly more likely to recidivate. Using this model, recidivism could be predicted accurately in 56% of cases, and no recidivism could be predicted accurately in 66% of the cases. Overall recidivism could be accurately predicted in 61% of the cases

TABLE 10: Logistic Regression: Control Variables and 1994 to 1997 Recidivism at 18 Months

Variable	*Coefficient*	SE	*Significance*	*Odds Ratio*
Victim race	0.59	0.29	.04	1.80
Court mandated	0.94	0.27	.00	2.57
Program completion	–0.63	0.21	.00	0.54
1994-1997	–0.44	0.20	.03	0.65
Constant	–0.40	0.25	.10	

TABLE 11: Logistic Regression: Control Variables and 1994 to 1998 Recidivism at 12 Months

Variable	*Coefficient*	SE	*Significance*	*Odds Ratio*
Victim race	0.72	0.35	.04	2.05
Court mandated	0.72	0.31	.02	2.05
Program completion	–0.97	0.26	.00	0.38
1994-1998	–0.76	0.28	.00	0.47
Constant	–0.31	0.27	.25	

based on this model ($\chi^2 = 27.64$, $df = 4$, $p = .00$). Variables not predicting recidivism were age of the victim, age of the offender, race of the offender, and number of group sessions attended. The same four variables were significantly related to recidivism at 6- and 12-month follow-up periods.

Forward logistic procedures including control variables and 1994 to 1998 as an independent variable at the 12-month follow-up resulted in four variables remaining in the final model (see Table 11). Similar to the previous findings, men whose victims were women of color were twice as likely to recidivate (odds ratio = 2.05, $p = .04$) as were men who were court-mandated to attend the men's program (odds ratio = 2.05, $p = .02$). Men who did not complete the program (odds ratio = 0.38, $p = .00$) and who entered the men's program in 1994 (odds ratio = 0.47, $p = .00$) were also significantly more likely to recidivate. Using this model, recidivism could be predicted accurately in 50% of cases, and no recidivism could be predicted accurately in 78% of the cases. Overall recidivism could be accurately predicted in 66% of the cases based on this model ($\chi^2 = 25.70$, $df = 3$, $p = .00$). Variables not predicting recidivism were age of the victim, age of the offender, race of the offender, and number of group sessions attended. The model was slightly different for 6-months recidivism with court mandated not being included in the

TABLE 12: Logistic Regression: Control Variables and Recidivism at 18 Months for All Years of the Study

Variable	*Coefficient*	SE	*Significance*	*Odds Ratio*
Court mandated	0.94	0.20	.00	2.58
Program completion	–0.73	0.16	.00	0.48
Constant	–0.52	0.17	.00	

model. And 18-month follow-up data were not examined for 1998 because of the possibility of incomplete data in some cases.

Forward logistic procedures examining the control variables for men in all years of the study resulted in two variables remaining in the final model at the 18-month follow up (see Table 12). Again, men who were court-mandated to attend the men's program (odds ratio = 2.57, p = .00) were more likely to recidivate, as were those that did not complete the program (odds ratio = 0.48, p = .00). At the 6- and 12-month follow ups, age was related to recidivism with younger men being more likely to recidivate. Men whose victims were older were also more likely to recidivate. However, these variables were no longer in the final model at the 18-month follow-up. Using this model, recidivism could be predicted accurately in 49% of cases, and no recidivism could be predicted accurately in 72% of the cases. Overall recidivism could be accurately predicted in 61% of the cases based on this model ($\chi^2 = 33.81$, $df = 2$, $p = .00$). Variables not predicting recidivism at any of the follow-up periods were race of victim, race of offender, and number of sessions attended.

DISCUSSION

The data provide support for the hypothesis that EDAIP offenders would have lower rates of recidivism when compared to DAIP offenders. 0ffenders from the 1996 pilot year did not have significantly lower recidivism rates, but the rates were significantly lower for offenders from the intervention years of 1997 and 1998 at 6- and 12-month follow-up periods. Significant differences were not found when 1994 and 1997 were compared at the 18-month follow up, although the results were in the expected direction and approached statistical significance. Further data to support the hypothesis are provided from the logistic regression, which controlled for demographic and programmatic variables when examining the differences between 1994 and later years of the study. These data found that having entered the program in 1997 and

1998 was significantly related to lower rates of recidivism at the 18-month follow-up when compared to the baseline year of 1994.

The recidivism rates in this study (ranging from 51% to 44% at the 18-month follow-up) were somewhat higher than reported in some studies (Gondolf, 1999; Shepard, 1992) but similar to or lower than others (Buzawa et al., 1999; Steinman, 1990). Differences in the outcome measures used and the length of follow-up periods may account for some of these differences. Studies that use criminal justice records are expected to yield lower rates of recidivism than those that rely on partner reports because many cases do not come to the attention of the authorities (Bennett & Williams, 2001). However, this was not found to be the case in this study where criminal justice records were used. An effort was made to minimize underreporting by including all police investigations for domestic violence–related offenses, not just those where an arrest was made. Recidivism rates are influenced by the unique qualities of each community, including intervention approaches and population characteristics. A previous study in this community reported a 40% recidivism rate and included men that entered the men's program approximately 10 years earlier (Shepard, 1992). It is not clear whether the recidivism rates have risen in the community or if the criminal justice system has become more aggressive in identifying offenders over the past 10 years.

Two variables were significantly related to offenders having recidivated during all years of the study: the offender having been court mandated to attend the batterer intervention program and the offender having failed to complete the program. The finding that court-mandated men were more likely to recidivate does not demonstrate that a court mandate in itself is related to recidivism. Barrera, Palmer, Brown, and Kalaher (1994) found that non-court-involved men were different in several respects from court-mandated men. Men who were not court-mandated reported more social support and were more likely to be employed full-time, have higher incomes, and score higher on interpersonal problems. According to the National Research Council (1996), some studies have found lower recidivism rates among men who were court-mandated, and others have not. There is evidence to suggest that men who are court-mandated are more likely to complete programs (Hamberger & Hastings, 1989) and, as found in this study, that those who complete treatment have lower rates of recidivism (Hamberger & Hastings, 1988).

Recidivism rates based on criminal justice records are only one measure of program success. In another part of the evaluation of the enhanced response, 90 women were interviewed regarding the abusive behavior of offenders using a modified version of the Abusive Behavior Inventory (Shepard & Falk, 2000). Women reported greater reductions in physical and

psychological abuse when the offender had been court-mandated to attend the program. They also reported greater reductions in physical abuse for men who had completed the program. Further study is needed to clarify the complex relationships between program completion, court mandates, and continued violence. Although it is promising that program completion lead to better outcomes in this study, this result may reflect the commitment of these men to change and may not be a direct result of the program.

There was evidence to support the use of the batterer categorizations by probation officers to predict recidivism. In general, men assigned lower categories, indicating that they were assessed by probation officers as being less dangerous offenders, did have lower rates of recidivism. Of Category 1 offenders (considered least likely to reoffend), 36% recidivated compared to 64% of Category 3 offenders (violence considered likely to escalate). However, it should be noted that further study is needed to establish the reliability and validity of this instrument, which was based largely on the probation officers' judgment in making the ratings based on the information they had received and collected from other sources, including advocates and the police. Further refinement of the process is needed to more accurately predict recidivism.

This study is limited because it does not have an experimental design. Although the comparison groups appeared to be relatively similar, they may have differed in some respects that were not anticipated by the researchers. Variables other than the intervention (EDAIP) may have influenced the outcomes. Data were collected from a number of criminal justice databases and checked for accuracy. Delays in data entry by the criminal justice system may have resulted in the 1998 recidivism data being incomplete at the time the study ended. Additional police contacts, which would have labeled a 1998 offender as a recidivist, would have been entered promptly, but complete data on OFPs may not have been available in some cases. Lower recidivism rates for 1998 offenders at the 12-month follow-up may be partially accounted for by incomplete data, particularly for those who did not have additional police contact but did have another OFP that was not recorded promptly.

The data did indicate that criminal justice professionals do not always follow protocols that have been developed and that this will continue to influence the effectiveness of coordinated interventions and the ability to evaluate them. However, the battering categories that were incorporated into a sentencing recommendation matrix when it was used by probation officer may be useful in identifying more serious offenders. This supports current efforts to use risk assessment tools in criminal justice settings (Goodman et al., 2000; Healey et al., 1998).

The study examines recidivism rates over time in the community to gauge the overall success of enhanced coordination, but it does not allow us to examine the relative effectiveness of a single component (e.g., use of danger assessments by community practitioners or batterer intervention). Gondolf (1999) stated, "It may be that each intervention system is defined more by the composite of its components and experience than by its individual components" (p. 58). The effectiveness of one component of the response is intertwined with that of the others.

The results are encouraging in that there was evidence of reduced recidivism rates with the enhanced coordinated responses. These findings are strengthened by steady declines in the number of recidivists over the 3 years of the project, beginning in the pilot year and increasing significantly during the intervention years. Overall, the study findings suggest that improved coordination through the sharing of risk assessment information among criminal justice professionals can reduce recidivism among men who abuse their partners.

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