

Section E. Examining the Relationships between Risk Factors and Program Outcomes.

Background

Specific risk factors may be associated with important program outcomes, such as offender recidivism rates, the frequency of psychological and physical abuse reported by victims, victim ratings of safety, and victim ratings of well-being. If these relationships exist, it may be possible to identify factors that are associated with domestic violence situations that are more dangerous in the long term or factors that are associated with domestic violence situations that may improve over time. This study will examine the relationships between specific risk factors and program outcomes.

Research Questions

How are the risk factors identified in a case situation related to:

- a) offender recidivism rates,
- b) the frequency of psychological and physical abuse reported by victims,
- c) victim ratings of safety, and
- d) victim ratings of well-being?

The method used to examine research question #6a on offender recidivism rates is different than the method used to examine the other three research questions. The method and results for research question #6a will therefore be reported in part one below. The method and results for research questions #6b (frequency of psychological and physical abuse reported by victims, question #6c (victim ratings of safety), and question #6d (victim ratings of well-being) will be reported in part two below. Part three, involving a joint discussion for all four research questions, will follow.

Part One: Method and Results for Recidivism

Method for Recidivism

Population and Sample

The population studied were male domestic violence offenders who were partners of women who sought help from a women's advocacy group in 1996, 1997, and 1998. Table 1 and 2 in the Section B of this report summarize the descriptive data available on male offenders and female victims for each year of the study. Demographic data was incomplete in some of the agency records from which the data was drawn. Data on income and education was not entered into the agency databases by DAIP staff and was, therefore, not available for analysis.

The sample studied included male offenders 1) who had partners for whom the woman's advocacy group had assessed risk in the current relationship and 2) for whom recidivism data was available. First, data was obtained from the Women's Coalition for women who had been assessed for risk during a home visit after police contact or at the time an order for protection was being filed. Secondly, the partners for these women were identified where possible and data on recidivism was obtained as described below.

Table 1a describes the ages of the sample of females who provided information about risk factors to the Women's Coalition; ages were available for all but one woman in the sample. Table 1b summarizes the ages of the male offenders who were partners to these women and on whom recidivism data was available; ages were available for all partners.

Table 1aAges of Women Who Were Women's Coalition Clients in 1996,1997, and 1998

| Age Groupings | 1996 (n=35) | 1997 (n=88) | 1998 (n=31) | Total (n=154) |
|---------------|----------------|----------------|----------------|------------------|
| Under 21 | 11% | 7% | 3% | 4% |
| 21-25 | 20% | 27% | 16% | 23% |
| 26-30 | 14% | 20% | 26% | 20% |
| 31-35 | 17% | 14% | 16% | 15% |
| 36-40 | 17% | 10% | 16% | 13% |
| over 40 | 20% | 22% | 23% | 21% |
| mean age | 31.9 | 31.8 | 33.0 | 32.1 |

Table 1bAges of Men Whose Partners Were Women's Coalition Clients in 1996,1997, and 1998

| Age Groupings | 1996 (n=35) | 1997 (n=89) | 1998 (n=31) | Total (n=155) |
|---------------|----------------|----------------|----------------|------------------|
| Under 21 | 9% | 3% | 3% | 4% |
| 21-25 | 17% | 16% | 13% | 16% |
| 26-30 | 14% | 27% | 19% | 22% |
| 31-35 | 14% | 15% | 26% | 17% |
| 36-40 | 20% | 16% | 19% | 17% |
| over 40 | 26% | 24% | 19% | 23% |
| mean age | 34.2 | 33.8 | 33.4 | 33.9 |

Information on race was also available for the women and some of their partners. Among all 155 women in the sample, 79% were white and 21% were women of color, with 16% being American Indian, 3% being Black, and Hispanic and Asian being 1% each. Among the 101 partners for whom information on race was available, 73% were white and 27% were men of color, with 14 % being American Indian, 10% being Black, 1% being Hispanic, and 2% being other races.

Design

Statistical procedures were used to determine the relationship between risk factors identified during the assessment completed by the Women's Coalition and recidivism data collected on their male partners. In addition, four control variables, client age, partner age, client race, and partner race, were examined to see if they were related to recidivism.

Operational Definitions

Risk factors were assessed by advocates at the Women's Coalition shortly after women sought help from this organization. Advocates conducted the risk assessment by asking 25 questions designed to assess for danger (See Table 2a for risk factor topics). These questions were developed by Elliott and Shepard (1995) from a review of the literature, particularly the work of Campbell (1995), and Shepard (1992), and from practitioners' experiences.

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

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

Data Analysis

In order to examine the relationship between risk factors and recidivism, the presence of risk factors and whether or not recidivism occurred at six, twelve, or eighteen months were compared using the Chi-Square statistic or Fisher's Exact Test. A t-test was conducted to determine if the client age or partner age was different for clients who recidivated and those who did not, and Chi-Square statistic or Fisher's Exact Test was used to determine if client and partner race were related to recidivism. Forward stepwise logistic procedures were then used to determine which set of risk factors, if any, discriminated between men who recidivated and men who did not. Client age and race and partner age and race were also included in the logistic procedure to determine if they had any impact.

Results for Recidivism

Recidivism after Six Months

The data in Table 2a summarize the relationship of the risk factors to recidivism that occurred within 6 months of the assessment. The Chi-Square statistic or Fisher's Exact Test was used to

determine whether or not each of the risk assessment factors was related to recidivism at 6 months. In this comparison, one factor (“Abuser seriously injured victim”) was found to be associated with 6 month recidivism at the .05 level. The data in Table 2a indicate that of the 56 relationships where the woman indicated the abuser had seriously injured her, 27 (48%) of the male partners recidivated within 6 months. Overall, about 37% of the males were identified as recidivating within 6 months, and for the 24 other risk factors there were no statistically significant relationships between the presence or absence of a risk factor in the relationship and recidivism after 6 months.

Table 2a
Relationship between 1996, 1997 & 1998 Women’s Coalition Risk Factors and Recidivism
After 6 months (155)

| Risk Factor | N yes to risk factor | Recidivate in 6 months? | | | | prob |
|---|----------------------------|-------------------------|-------------------|------|----|------|
| | | no (n=98) 63% | yes (n=57) 39% | | | |
| | | freq | % | freq | % | |
| 1. Abuser seriously injured victim | 56 | 29 | 52 | 27 | 48 | .03* |
| 2. Abuser preoccupied/obsessed w/victim. | 95 | 59 | 62 | 36 | 38 | .72 |
| 3. Abuser have access to gun. | 36 | 24 | 67 | 12 | 33 | .63 |
| 4. Abusers assaults more violent. | 95 | 62 | 65 | 33 | 35 | .51 |
| 5. Abuser ever choked victim. | 76 | 47 | 62 | 27 | 38 | .73 |
| 6. Abuser injured or killed pet. | 26 | 17 | 65 | 98 | 35 | .80 |
| 7. Victim believe abuser will seriously injure or kill victim. | 97 | 61 | 63 | 36 | 37 | .91 |
| 8. Victim protective of abuser. | 34 | 25 | 74 | 9 | 26 | .16 |
| 9. Victim separated or tried to separate from abuser in last 12 months. | 97 | 61 | 63 | 36 | 37 | .91 |
| 10. Abuser drink/alcohol problem. | 61 | 37 | 61 | 24 | 39 | .39 |
| 11. Abuser use street drugs. | 36 | 23 | 64 | 13 | 36 | .93 |
| 12. Abuser been to alcohol/drug treatment. | 46 | 25 | 54 | 21 | 46 | .14 |
| 13. Victim sought help in last 12 months. | 86 | 52 | 60 | 34 | 40 | .43 |
| 14. Abuser threatened to kill victim. | 79 | 48 | 61 | 31 | 39 | .52 |
| 15. Abuser abused as child or witness. | 39 | 27 | 69 | 12 | 31 | .37 |
| 16. Victim seems isolated from help. | 63 | 41 | 65 | 24 | 35 | .69 |
| 17. Victim assaulted by ab while pregnant. | 22 | 14 | 64 | 8 | 36 | .96 |
| 18. Abuser threatened/tried suicide. | 54 | 35 | 65 | 19 | 35 | .76 |
| 19. Abuse included sexual coercion/attacks. | 39 | 23 | 59 | 16 | 41 | .52 |
| 20. Abuser used/threatened to use weapon. | 56 | 35 | 62 | 21 | 38 | .89 |
| 21. Abuser lacks remorse or sadness. | 53 | 32 | 60 | 21 | 40 | .60 |
| 22. Abuser committed non-violent crimes. | 37 | 23 | 62 | 14 | 38 | .88 |
| 23. Abuser history of violence to others. | 66 | 40 | 61 | 26 | 39 | .56 |
| 24. Abuser have high stress recently. | 72 | 46 | 64 | 26 | 36 | .87 |
| 25. Abuser assaulting victim more frequently. | 81 | 55 | 68 | 26 | 32 | .21 |

*Significant at the .05 level or higher

When forward logistic regression procedure was done, two items remained in the final model; item # 1 (“Abuser seriously injured victim”) and item # 25 (“Abuser assaulting victim more frequently) discriminated between recidivism and no recidivism at 6 months (Table 2b). If the woman answered yes to item #1 about the abuser seriously injuring her, it was more likely that

recidivism occurred for the male. Unexpectedly, if the woman reported that the abuser had been assaulting her more frequently, it was less likely that recidivism would occur after 6 months. Using this model, lack of recidivism after 6 months could be predicted accurately 91 out of 97 times (94% of the cases), but recidivism could be only be predicted 9 out of 57 times (16% of the cases). Overall, recidivism after 6 months could be predicted accurately 65% of the time based on this model. The Chi-Square for the model was 9.44 with 2 degrees of freedom, which was significant at the .01 level.

Table 2b
Logistic Regression: Women’s Coalition Risk Factors and Recidivism after 6 Months

| Risk Factors | Recidivism after 6 months | | |
|-------------------------------------|---------------------------|-------|------------|
| | Beta | Prob. | Odds Ratio |
| Abuser seriously injured victim | 1.04 | .003 | 2.83 |
| Abuser assaulting victim more freq. | -.80 | .016 | .45 |

Recidivism after Twelve Months

The data in Table 2c summarize the relationship of the risk factors to recidivism that occurred within 12 months of the assessment. In this comparison, two factors, item #1 (“Abuser seriously injured victim”) and item #6 (“Abuser injured or killed pet”) were found to be associated with 12 month recidivism at the .05 level or better. The data in Table 2c indicate that of the 51 relationships where the woman indicated the abuser had seriously injured her, 33 (65%) of the male partners recidivated within 12 months. Overall, about 53% of the males were identified as recidivating within 12 months. The data indicate that for the 23 relationships where the woman reported that the abuser had injured or killed a pet, 18 (78%) had recidivated in 12 months. For the 23 other risk factors there were no statistically significant relationships between the presence or absence of a risk factor in the relationship and recidivism after 12 months.

Table 2cRelationship between 1996, and 1997 Women's Coalition Risk Factors and Recidivism After 12 months (N=124)

| Risk Factor | N yes to risk factor | Recidivate in 12 months? | | | | prob |
|---|----------------------------|--------------------------|----|-------------------|----|------|
| | | no (n=58) 47% | | yes (n=66) 53% | | |
| | | freq | % | freq | % | |
| 1. Abuser seriously injured victim. | 51 | 18 | 35 | 33 | 65 | .03* |
| 2. Abuser preoccupied/obsessed w/victim | 78 | 37 | 47 | 41 | 53 | .85 |
| 3. Abuser has access to gun. | 29 | 14 | 58 | 10 | 42 | .21 |
| 4. Abusers assaults more violent. | 80 | 36 | 45 | 44 | 55 | .59 |
| 5. Abuser ever choked victim. | 59 | 27 | 46 | 32 | 54 | .83 |
| 6. Abuser injured or killed pet. | 23 | 5 | 22 | 18 | 78 | .01* |
| 7. Victim believe abuser will seriously injure or kill victim. | 79 | 34 | 43 | 45 | 57 | .27 |
| 8. Victim protective of abuser. | 25 | 13 | 52 | 12 | 48 | .56 |
| 9. Victim separated or tried to separate from abuser in last 12 months. | 76 | 32 | 42 | 44 | 58 | .19 |
| 10. Abuser alcohol problem. | 51 | 25 | 49 | 26 | 51 | .67 |
| 11. Abuser use street drugs. drugs. | 30 | 12 | 40 | 18 | 60 | .39 |
| 12. Abuser been to alcohol/drug treatment. | 36 | 17 | 47 | 19 | 53 | .95 |
| 13. Victim sought help in last 12 months. | 70 | 29 | 41 | 41 | 59 | .17 |
| 14. Abuser threatened to kill victim. victim. | 69 | 28 | 40 | 41 | 60 | .12 |
| 15. Abuser abused as child or witness. | 29 | 12 | 41 | 17 | 59 | .51 |
| 16. Victim seems isolated from help. | 52 | 24 | 46 | 28 | 54 | .91 |
| 17. Victim assaulted by ab while pregnant. | 19 | 98 | 47 | 10 | 53 | .96 |
| 18. Abuser threatened/tried suicide. | 45 | 21 | 47 | 24 | 53 | .99 |
| 19. Abused included sexual coercion/attacks. | 32 | 11 | 34 | 21 | 66 | .10 |
| 20. Abuser used/threatened to use weapon. | 48 | 21 | 44 | 27 | 56 | .59 |
| 21. Abuser lacks remorse or sadness. | 39 | 17 | 44 | 22 | 56 | .63 |
| 22. Abuser committed non-violent crimes. | 31 | 13 | 42 | 18 | 58 | .53 |
| 23. Abuser history of violence to others. | 50 | 19 | 38 | 31 | 62 | .11 |
| 24. Abuser have high stress recently. | 52 | 23 | 44 | 29 | 56 | .63 |
| 25. Abuser assaulting victim more frequently. | 68 | 34 | 50 | 34 | 50 | .43 |

*Significant at the .05 level or higher

When forward logistic regression procedure was done, one item remained in the final model: item # 6 (“Abuser injured or killed pet”) discriminated between recidivism and no recidivism at 12 months (Table 2d). If the woman answered yes to item #6 about the abuser injuring or killing a pet, it was more likely that recidivism occurred for the male. Using this model, lack of recidivism after 12 months could be predicted accurately 52 out of 57 times (91% of the cases), but recidivism could be only be predicted 18 out of 66 times (27% of the cases). Overall, recidivism after 12 months could be predicted accurately 57% of the time based on this model. The Chi-Square for the model was 7.30 with 1 degree of freedom, which was significant at the .01 level.

Table 2dLogistic Regression: Women’s Coalition Risk Factors and Recidivism after 12 Months

| Recidivism after 12 months | | | |
|--------------------------------|------|------------|-------|
| Risk Factor | Beta | Odds Prob. | Ratio |
| Abuser injured or killed a pet | 1.36 | .01 | 3.90 |

Recidivism after Eighteen Months

The data in Table 2e summarize the relationship of the risk factors to recidivism that occurred within 18 months of the assessment. In this comparison, one factor, item #6 (“Abuser injured or killed pet”) was found to be associated with 18 month recidivism at the .05 level or better. Overall, about 62% of the males were identified as recidivating within 18 months. The data indicate that for the 23 relationships where the woman reported that the abuser had injured or killed a pet, 19 (83%) had recidivated in 18 months. Two other factors approached statistical significance; a positive response to item # 23 (Abuser has a history of violence toward others”) was associated with recidivism after 18 months 72% of the time ($p=.06$), and a positive response to item # 19 (Abuse included sexual coercion/attacks) was associated with recidivism 75% of the time ($p=.08$). For the 22 other risk factors, the probability of a relationship between the presence or absence of a risk factor in the relationship and recidivism after 18 months was greater than .10.

Table 2eRelationship between 1996 and 1997 Women's Coalition Risk Factors and Recidivism after 18 months (N=124)

| Risk Factor | N yes to risk factor | Recidivate in 18 months | | | | |
|--|----------------------------|-------------------------|----|-------------------|----|------|
| | | no (n=47) 38% | | yes (n=77) 62% | | prob |
| | | freq | % | freq | % | |
| 1. Abuser seriously injured victim. | 51 | 17 | 33 | 34 | 67 | .38 |
| 2. Abuser preoccupied/obsessed w/victim | 78 | 28 | 36 | 50 | 64 | .55 |
| 3. Abuser have access to gun. | 24 | 11 | 46 | 13 | 54 | .37 |
| 4. Abusers assaults more violent. | 80 | 31 | 39 | 49 | 61 | .79 |
| 5. Abuser ever choked victim. | 59 | 25 | 42 | 34 | 58 | .33 |
| 6. Abuser injured or killed pet. | 23 | 4 | 17 | 19 | 83 | .02* |
| 7. Victim believe abuser will seriously injure or kill victim. | 79 | 28 | 35 | 51 | 65 | .45 |
| 8. Victim protective of abuser. | 25 | 8 | 32 | 17 | 68 | .50 |
| 9. Victim separated or tried to separate from abuser in last 12 months. | 76 | 28 | 37 | 48 | 63 | .76 |
| 10. Abuser has alcohol problem. | 51 | 19 | 37 | 33 | 63 | .90 |
| 11. Abuser use street drugs. | 30 | 10 | 33 | 20 | 67 | .55 |
| 12. Abuser been to alcohol/drug treatment | 36 | 14 | 39 | 22 | 61 | .88 |
| 13. Victim sought help in last 12 months. | 70 | 26 | 37 | 44 | 63 | .84 |
| 14. Abuser threatened to kill victim. | 69 | 23 | 33 | 46 | 67 | .24 |
| 15. Abuser abused as child or witness. | 29 | 9 | 31 | 20 | 69 | .38 |
| 16. Victim seems isolated from help. | 52 | 19 | 36 | 33 | 64 | .79 |
| 17. Victim assaulted by ab while pregnant. | 19 | 7 | 37 | 12 | 63 | .92 |
| 18. Abuser threatened/tried suicide. | 45 | 17 | 38 | 28 | 62 | .98 |
| 19. Abuse included sexual coercion/attacks. | 32 | 8 | 25 | 24 | 75 | .08 |
| 20. Abuser used/threatened to use weapon. | 48 | 16 | 33 | 37 | 67 | .40 |
| 21. Abuser lacks remorse or sadness. | 39 | 12 | 31 | 27 | 69 | .27 |
| 22. Abuser committed non-violent crimes. crimes. | 31 | 11 | 36 | 20 | 64 | .75 |
| 23. Abuser history of violence to others. | 50 | 14 | 28 | 36 | 72 | .06 |
| 24. Abuser has high stress recently. | 52 | 19 | 36 | 33 | 64 | .79 |
| 25. Abuser assaulting victim more frequently. | 68 | 30 | 44 | 38 | 56 | .12 |

*Significant at the .05 level or higher

When forward logistic regression procedure was done, only one item remained in the final model: item # 6 ("Abuser injured or killed pet") discriminated between recidivism and no recidivism at 18 months (Table 2f). If the woman answered yes to item #6 about the abuser injuring or killing a pet, it was more likely that recidivism occurred for the male. Using this model, recidivism after 18 months could be predicted accurately 76 out of 76 times (100% of the cases), but lack of recidivism could not be predicted (0 out of 47 times or 0% of the cases). Overall, recidivism after 18 months could be predicted accurately 62% of the time based on this model. The Chi-Square for the model was 5.70 with 1 degree of freedom, which was significant at the .02 level.

Table 2fLogistic Regression: Women’s Coalition Risk Factors and Recidivism after 18 Months

| Risk Factor | Recidivism after 12 months | | |
|--------------------------------|----------------------------|------------|-------|
| | Beta | Odds Prob. | Ratio |
| Abuser injured or killed a pet | 1.28 | .01 | 3.58 |

Control Variables

None of the control variables, which included client age and race and partner age and race, were found to be related to recidivism at 6, 12, or 18 months. Chi square or Fisher Exact Tests comparing race of the client or partner (white or person of color) to all three measures of recidivism failed to yield any significant relationships. T-tests comparing the ages of clients or partners where recidivism occurred to those where recidivism did not occur resulted in no significant differences. None of the control variables entered into any of the logistic regression models to predict recidivism at 6, 12, or 18 months.

Part Two: Method and Results for Abuse, Women’s Safety, and Women’s Well-Being**Method for Abuse, Safety, and Well-Being****Population and Sample**

The population studied were the female victims of male domestic violence offenders who entered the DAIP Men’s Nonviolence Program during 1996 and 1997. The sample included 62 women during these two years who agreed to be interviewed eighteen months after the offender’s intake appointment.

Unfortunately, we were unsuccessful in contacting many of the women for interviews. This was primarily due to being unable to locate them. Of the 217 women that we attempted to contact in 1996, 74% could not be located, 10% declined to be interviewed and 16% were interviewed. Of the 220 women from 1997, 76% could not be located for the interview, 11% declined to be interviewed and 13% were actually interviewed.

Table 17 in Part Two of Section B of this report focusing on hypothesis #3 summarizes the descriptive data available for the sample.

Design

Statistical procedures were used to determine the relationship between risk factors identified during the interview with women survivors and measures of abuse, women’s safety, and women’s well-being collected in these same interviews. In addition, four control variables, client age,

partner age, client race, and partner race, were examined to see if they were related to any of the three dependent measures.

Data Collection and Operational Definitions

Women were initially contacted by mail to request their participation in the study eighteen months after the offender's intake appointment with the Men's Nonviolence Program. Women were asked to either return a signed consent form indicating their willingness to be interviewed or to return a form indicating that they did not wish to be contacted for an interview. A trained interviewer contacted the women and in most cases interviewed her by phone. If women did not respond, they received a second mailing. Follow-up phone calls were attempted when women did not respond to either of the first two inquiries.

The Survivor's Experiences Questionnaire used in the interviews is located in the Appendix. This in-depth interview took approximately one hour to complete. Areas covered in the interview included experiences with domestic violence services, offender risk factors, current and previous abuse on the part of the offender, and the women's current status in terms of their safety and well-being. Risk factors and three main outcome variables were examined in this part of the study and are operationally defined below.

Risk factors were first assessed by asking women to report whether or not 12 risk factors were present in the woman's relationship with her partner in the three months prior to the partner's involvement with DAIP men's non-violence groups. These 12 risk factors are listed in Table 3a below. Therefore women were reporting on a period that was 18 to 21 months prior to the time of the interview on these 12 factors. An additional section of the questionnaire asked women to report whether or not 13 risk factors were ever present in the woman's relationship with her partner before his arrest and/or OFP; these 13 factors are listed in Table 3b below. For each of the 25 factors, the factor was recorded as present in the relationship if the woman responded "yes," and was recorded as being absent in the relationship if she responded "no" or "unknown."

Program outcomes included the frequency of psychological and physical abuse reported by victims, victim ratings of safety, and victim ratings of well-being. These outcomes are operationally defined below.

Frequency of Abusive Behavior. The frequency of abusive behavior as reported by victims was determined by using the Abusive Behavior Inventory (Shepard & Campbell, 1992) located in Part VII of the Survivor's Experiences Questionnaire (see Appendix). Four items were modified from the original inventory based upon a validity study of the instrument (Shepard & Campbell, 1992) and feedback from the evaluation team and program staff. Respondents were asked to rate the frequency of physical and psychological abusive behavior during the most recent three months (approximately 16 to 18 months after the incident) on a scale from 1 to 5 (1=Never, 2=Rarely, 3=Occasionally, 4=Frequently, 5=Very Frequently). The Abusive Behavior Inventory (ABI) has physical and psychological abuse subscales which were examined separately for each respondent. Frequency ratings for each subscale item were summed and divided by the total number of subscale items to obtain subscale scores for physical and psychological abuse. Additional information about the Abusive Behavior appears in Section B of this report.

Women's Safety. Women's safety was measured using item #159 on the Survivors' Experiences Questionnaire (see Appendix). Women were asked: "How safe do you feel now--is it worse, better, or the same?" The responses to this item were collapsed to provide a response of safer ("better") or not safer ("worse" or "the same").

Women's Well Being. Women's well being was determined by the responses of women who rated themselves as "worse", "better", or "same" on items relating to their freedom to make decisions,

how they feel emotionally, how they feel about their economic situation, how they feel physically, how they feel about social relationships, how they feel about their spiritual life, and how they feel about their relationship with their children (items #148-156) on the Survivor's Experiences Questionnaire (see Appendix). Two well-being scores were calculated for each woman by adding the number of items that received a "better" rating. One score included items relating to children and one score did not. This was done because not all women had children and, therefore, could not respond to all the items. The overall well-being score included six items that related solely to the woman and three items that related to her relationship with her children. The non-parental well-being score included only the first six items.

Data Analysis

In order to examine the relationship between risk factors and safety, the presence of risk factors and whether or not safety had improved were compared using a Chi-Square or the Fisher's Exact Test. A t-test was conducted to determine if the client age or partner age were different for women who reported feeling safer and those who did not, and Fisher's Exact Test was used to determine if women's and partner's race were related to safety. Logistic regression procedures were then used to determine which set of risk factors, if any, discriminated between women who reported feeling safer and those who did not. Client age and race and partner age and race were also included in the logistic regression procedure to determine if they had any impact.

In examining the relationship between risk factors and measures of abuse and well-being, t-tests were used to determine if women who reported that a particular risk factor was present differed significantly on measures of abuse and well-being from the women who reported that risk factor absent. T-tests were also used to determine if dependent measures were affected by the women's or partner's race. A possible relationship between abuse and well-being scores and woman's age and partner's age was explored with Pearson's correlation. Linear regression procedures were then used to determine which set of risk factors, if any, could be used to predict measures of abuse and well-being. Client age and race and partner age and race were also included in the linear regression procedure to determine if they had any impact.

Results for Abuse, Safety, and Well-Being

Abusive Behavior

Psychological Abuse. T-tests were used to determine if the psychological abuse score at the 18 month follow-up was higher when a risk factor was reported as being present in a relationship compared to when the factor was not present (see tables 3a and 3b). For risk factors that had occurred in the past three months, psychological abuse was significantly higher when violence was happening more often ($t=2.03$; $p=.05$) and when violence was becoming more severe ($t=2.41$; $p=.02$). For factors that had ever been present in the relationship, the psychological abuse score was higher if the abuser had threatened or forced the victim to have sex ($t=2.86$; $p=.01$). Unexpectedly, the psychological abuse score was somewhat lower if the abuser had threatened or tried to commit suicide ($t=1.82$; $p=.07$); but this difference did not achieve the level of significance adopted for this study.

Table 3a**Relationship between Interview Risk Factors and Psychological Abuse (n=61)**

| Risk Factors—last 3 months | Factor Absent | | Factor Present | | t-value | prob |
|--|---------------|------------------------|----------------|------------------------|---------|------|
| | Number | Mean Psych Abuse Score | Number | Mean Psych Abuse Score | | |
| 1. Violence happening more often. | 21 | 1.48 | 39 | 1.98 | 2.03 | .05* |
| 2. Violence getting more severe. | 16 | 1.35 | 43 | 1.91 | 2.41 | .02* |
| 3. Victim more afraid of abuser. | 19 | 1.81 | 42 | 1.78 | .12 | .90 |
| 4. Victim trying to separate from abuser. | 23 | 1.85 | 38 | 1.73 | .36 | .72 |
| 5. Victim try to protect abuser. | 44 | 1.68 | 16 | 2.15 | 1.36 | .20 |
| 6. Abuser try to limit victim contact. | 29 | 1.66 | 32 | 1.91 | .99 | .32 |
| 7. Abuser have problem with alcohol. | 17 | 1.64 | 49 | 1.85 | .72 | .48 |
| 8. Abuser using street drugs. | 39 | 1.80 | 22 | 1.78 | .06 | .96 |
| 9. Abuser have access to a gun. | 28 | 1.91 | 32 | 1.66 | .95 | .34 |
| 10. Abuser feel badly about violence. | 25 | 1.84 | 36 | 1.76 | .28 | .78 |
| 11. Abuser experiencing high stress. | 34 | 1.72 | 27 | 1.88 | .62 | .54 |
| 12. Abuser obsessed/preoccupied w. victim. | 19 | 1.60 | 42 | 1.88 | 1.17 | .24 |

*Significant at the .05 level or higher

Stepwise multiple linear regression was calculated to determine what factors, if any, were significant in predicting the psychological abuse score. A significant regression equation was found [$F(3,50)=7.17$, $p=.0004$], with an R^2 of .30. The psychological abuse score was generally higher if violence in the relationship was getting more severe in the last three months or if the abuser had ever threatened or forced the victim to have sex. The psychological abuse score was generally lower if the abuser had ever threatened or tried to commit suicide. Table 3c summarizes relevant statistics.

Table 3bRelationship between Interview Risk Factors and Psychological Abuse (n=61)

| Risk Factors—ever | Factor Absent | | Factor Present | | t-value | prob |
|--|---------------|------------------------|----------------|------------------------|---------|------|
| | Number | Mean Psych Abuse Score | Number | Mean Psych Abuse Score | | |
| 1. Abuser injured victim so badly that required medical attention. | 45 | 1.66 | 16 | 2.15 | 1.37 | .19 |
| 2. Abuser threatened to kill victim. | 33 | 1.63 | 28 | 1.97 | 1.26 | .22 |
| 3. Abuser assaulted victim while pregnant. | 45 | 1.80 | 16 | 1.75 | .18 | .86 |
| 4. Abuser threatened/forced victim to have sex. | 25 | 1.40 | 36 | 2.06 | 2.86 | .01* |
| 5. Abuser choked victim. | 33 | 1.78 | 28 | 1.80 | .11 | .13 |
| 6. Abuser threatened to use gun against victim. | 38 | 1.73 | 23 | 1.89 | .53 | .60 |
| 7. Abuser used gun or other weapon against victim. | 46 | 1.75 | 15 | 1.91 | .51 | .61 |
| 8. Victim sought outside help because of abuse. | 27 | 1.82 | 34 | 1.77 | .21 | .84 |
| 9. Abuser been through alcohol or drug treatment. | 25 | 1.94 | 36 | 1.69 | .93 | .35 |
| 10. Abuser has history of violence toward others. | 16 | 1.66 | 45 | 1.84 | .60 | .55 |
| 11. Abuser committed non-violent crimes. | 30 | 1.80 | 31 | 1.79 | .04 | .97 |
| 12. Abuser injured or killed a pet. | 32 | 2.02 | 28 | 1.55 | 1.82 | .07 |

Table 3cStepwise Multiple Regression: Women's Interview Risk Factors and Psychological Abuse Score

| Risk Factors | Psychological Abuse Score | | |
|--|---------------------------|----------------|-------------------------|
| | Beta | Standard Error | Significance of t score |
| Violence getting more severe (3 mo.). | .94 | .30 | .002 |
| Abuser threatened/forced victim to have sex (ever) | .61 | .26 | .01 |
| Abuser threatened/tried to commit suicide (ever) | -.86 | .27 | .001 |

Physical Abuse. T-tests were used to determine if the physical abuse score was higher at the 18 month follow-up when a risk factor was reported as being present in a relationship compared to when the factor was not present (see tables 4a and 4b). For risk factors that had occurred in the past three months, physical abuse was significantly higher when violence was becoming more severe ($t=2.11$; $p=.04$) and when the abuser had a problem with alcohol ($t=2.03$; $p=.04$). For factors that had ever been present in the relationship, the physical abuse score was higher if the abuser had threatened or forced the victim to have sex ($t=2.44$; $p=.02$). The physical abuse score was somewhat lower if the abuser had threatened to kill the victim ($t=1.78$; $p=.08$), but this

difference did not achieve the level of significance adopted for this study.

Table 4a

Relationship between Interview Risk Factors and Physical Abuse (n=62)

| Risk Factors—last 3 months | Factor Absent | | Factor Present | | t-value | prob |
|---|---------------|---------------------------|----------------|---------------------------|---------|------|
| | Number | Mean Physical Abuse Score | Number | Mean Physical Abuse Score | | |
| 1. Violence happening more often. | 21 | 1.21 | 39 | 1.38 | .91 | .37 |
| 2. Violence getting more severe. | 16 | 1.09 | 43 | 1.36 | 2.11 | .04* |
| 3. Victim more afraid of abuser. | 19 | 1.27 | 42 | 1.34 | .38 | .70 |
| 4. Victim trying to separate from abuser. | 23 | 1.30 | 38 | 1.33 | .17 | .86 |
| 5. Victim try to protect abuser from authorities. | 44 | 1.24 | 16 | 1.55 | 1.29 | .22 |
| 6. Abuser try to limit victim contact with others. | 29 | 1.20 | 32 | 1.42 | 1.33 | .20 |
| 7. Abuser have problem with alcohol. | 17 | 1.11 | 44 | 1.40 | 2.19 | .04* |
| 8. Abuser using street drugs. | 39 | 1.22 | 22 | 1.48 | 1.30 | .20 |
| 9. Abuser have access to a gun. | 28 | 1.39 | 32 | 1.23 | 1.71 | .36 |
| 10. Abuser feel badly about violence toward victim. | 25 | 1.40 | 36 | 1.26 | .77 | .44 |
| 11. Abuser experiencing unusually high stress. | 34 | 1.26 | 27 | 1.39 | .79 | .44 |
| 12. Abuser obsessed/preoccupied with victim. | 19 | 1.27 | 42 | 1.34 | .35 | .72 |

*Significant at the .05 level or higher

Table 4b

Relationship between Interview Risk Factors and Physical Abuse (n=61)

| Risk Factors—ever | Factor Absent | | Factor Present | | t-value | prob. |
|--|---------------|---------------------------|----------------|---------------------------|---------|-------|
| | Number | Mean Physical Abuse Score | Number | Mean Physical Abuse Score | | |
| 1. Abuser injured victim so badly that required medical attention. | 45 | 1.19 | 16 | 1.67 | 1.74 | .10 |
| 2. Abuser threatened to kill victim. | 33 | 1.17 | 28 | 1.49 | 1.78 | .08 |
| 3. Abuser assaulted victim while pregnant. | 45 | 1.30 | 16 | 1.36 | .30 | .76 |
| 4. Abuser threatened/forced victim to have sex. | 25 | 1.10 | 36 | 2.46 | 2.44 | .02* |
| 5. Abuser choked victim. | 33 | 1.25 | 28 | 1.39 | .78 | .43 |
| 6. Abuser threatened to use gun against victim. | 78 | 1.29 | 23 | 1.36 | .37 | .72 |
| 7. Abuser used gun or other weapon against victim. | 46 | 1.26 | 15 | 1.49 | 1.13 | .27 |
| 8. Victim sought outside help because of abuse. | 27 | 1.26 | 34 | 1.36 | .53 | .60 |
| 9. Abuser been through alcohol or drug victim. | 25 | 1.33 | 36 | 1.31 | .12 | .90 |
| 10. Abuser has history of violence toward others. | 16 | 1.22 | 45 | 1.35 | .69 | .51 |
| 11. Abuser committed non-violent crimes. | 30 | 1.27 | 31 | 1.36 | .50 | .81 |
| 12. Abuser injured or killed a pet. | 48 | 1.30 | 12 | 1.42 | .57 | .55 |
| 13. Abuser threatened/tried to commit suicide. | 32 | 1.39 | 28 | 1.24 | .88 | .38 |

*Significant at the .05 level or higher

Stepwise multiple linear regression was calculated to determine what factors, if any, were

significant in predicting the physical abuse score. A significant regression equation was found [$F(1,52)=8.49$, $p=.005$], with an R^2 of .14. The physical abuse score was generally higher if the abuser had ever injured the victim so badly that she required medical attention. No other variables entered into the equation. Table 4c summarizes relevant statistics.

Table 4c

Stepwise Multiple Regression: Women's Interview Risk Factors and Physical Abuse Score

| Physical Abuse Score | | | |
|--|------|----------------|-------------------------|
| Risk Factor | Beta | Standard Error | Significance of t score |
| Abuser ever injured victim so badly that medical attention was required. | .57 | .19 | .03 |

Total Abuse. T-tests were used to determine if the total abuse score (the psychological abuse score plus the physical abuse score) was higher when a risk factor was reported as being present in a relationship compared to when the factor was not present (see tables 5a and 5b). For risk factors that had occurred in the three months prior to intake, total abuse was significantly higher when violence was becoming more severe ($t=2.53$; $p=.03$). For factors that had ever been present in the relationship, the total abuse score was higher if the abuser had threatened or forced the victim to have sex ($t=2.90$; $p=.01$).

Table 5a

Relationship between Interview Risk Factors and Total Abuse (n=62)

| Risk Factors—last 3 months | Factor Absent | | Factor Present | | t-value | prob |
|---|---------------|------------------|----------------|------------------|---------|------|
| | Number | Mean Abuse Score | Number | Mean Abuse Score | | |
| 1. Violence happening more often. | 21 | 2.69 | 39 | 3.36 | 1.53 | .13 |
| 2. Violence getting more severe. | 16 | 2.43 | 43 | 3.27 | 2.52 | .03* |
| 3. Victim more afraid of abuser. | 19 | 3.08 | 42 | 3.11 | .08 | .94 |
| 4. Victim trying to separate from abuser. | 23 | 3.13 | 38 | 3.08 | .16 | .88 |
| 5. Victim try to protect abuser from authorities. | 44 | 2.92 | 16 | 3.70 | 1.40 | .18 |
| 6. Abuser try to limit victim contact with others. | 29 | 2.86 | 32 | 3.33 | 1.18 | .24 |
| 7. Abuser have problem with alcohol. | 17 | 2.75 | 44 | 3.25 | 1.43 | .16 |
| 8. Abuser using street drugs. | 39 | 3.01 | 22 | 3.26 | .56 | .59 |
| 9. Abuser have access to a gun. | 28 | 3.30 | 32 | 2.87 | .99 | .31 |
| 10. Abuser feel badly about violence toward victim. | 25 | 3.24 | 36 | 3.01 | .53 | .60 |
| 11. Abuser experiencing unusually high stress. | 34 | 2.97 | 27 | 3.28 | .72 | .89 |
| 12. Abuser obsessed/preoccupied with victim. | 19 | 2.88 | 42 | 3.21 | .92 | .36 |

*Significant at the .05 level or higher

Table 5bRelationship between Interview Risk Factors and Total Abuse (n=61)

| Risk Factors—ever | Factor Absent | | Factor Present | | t-value | prob |
|--|---------------|------------------|----------------|------------------|---------|------|
| | Number | Mean Abuse Score | Number | Mean Abuse Score | | |
| 1. Abuser injured victim so badly that required medical attention. | 45 | 2.85 | 16 | 3.82 | 1.60 | .13 |
| 2. Abuser threatened to kill victim. | 33 | 2.80 | 28 | 3.46 | 1.55 | .13 |
| 3. Abuser assaulted victim while pregnant. | 45 | 3.11 | 16 | 3.11 | .01 | .99 |
| 4. Abuser threatened/forced victim to have sex. | 25 | 2.51 | 36 | 3.52 | 2.90 | .01* |
| 5. Abuser choked victim. | 33 | 3.03 | 28 | 3.20 | .40 | .70 |
| 6. Abuser threatened to use gun against victim. | 38 | 3.02 | 23 | 3.25 | .52 | .60 |
| 7. Abuser used gun or other weapon against victim. | 46 | 3.01 | 15 | 3.40 | .80 | .42 |
| 8. Victim sought outside help because of abuse. | 27 | 3.09 | 34 | 3.12 | .09 | .93 |
| 9. Abuser been through alcohol or drug victim. | 25 | 3.27 | 36 | 2.99 | .66 | .52 |
| 10. Abuser has history of violence toward others. | 16 | 2.87 | 45 | 3.19 | .67 | .51 |
| 11. Abuser committed non-violent crimes. | 30 | 3.07 | 31 | 3.14 | .19 | .86 |
| 12. Abuser injured or killed a pet. | 48 | 3.06 | 12 | 3.40 | .65 | .52 |
| 13. Abuser threatened/tried to commit suicide. | 32 | 3.42 | 28 | 2.79 | 1.50 | .14 |

*Significant at the .05 level or higher

Stepwise multiple linear regression was calculated to determine what factors, if any, were significant in predicting the total abuse score. A significant regression equation was found [$F(3,50)=5.08, p=.004$], with an R^2 of .23. The total abuse score was generally higher if the abuser had injured the victim so badly that she required medical attention or if the abuser had ever threatened or forced the victim to have sex. The total abuse score was generally lower if the abuser had ever threatened or tried to commit suicide. Table 5c summarizes relevant statistics.

Table 5cStepwise Multiple Regression: Women's Interview Risk Factors and Total Abuse Score

| Risk Factors | Total Abuse Score | | |
|--|-------------------|----------------|-------------------------|
| | Beta | Standard Error | Significance of t score |
| Abuser ever injured victim so badly that medical attention was required. | 1.08 | .46 | .01 |
| Abuser ever threatened/forced victim to have sex. | .95 | .42 | .01 |
| Abuser ever threatened/tried to commit suicide. | -.82 | .41 | .02 |

Control Variables

None of the control variables, which included client age and race and partner age and race, were found to be related to any of the three measures of abuse. T-tests comparing measures of abuse for white women and their partners to women and partners of color did not result in significant differences. Pearson correlations comparing the ages of clients or partners to measures of abuse resulted in no significant relationships. None of the control variables entered into the multiple linear regression models to predict the three measures of abuse.

Safety

The data in Table 6a and 6b summarize the relationship of the risk factors to safety as reported by women 18 months after their partner became involved with DAIP. The Chi-Square statistic or Fisher's Exact Test was used to determine whether or not each of the risk assessment factors was related to safety. None of the risk factors that had occurred in the three months prior to woman's partner's involvement with DAIP men's non-violence groups were significantly related to safety. Similarly, none of the risk factors that had ever occurred in the relationship were significantly related to safety. Unexpectedly, all (100%) of the 11 women who were in a relationship where the abuser had ever injured or killed a pet reported that they felt safer 18 months later; this compares to 80% of women overall who reporting feeling safer after 18 months. This relationship just missed statistical significance ($p=.06$).

When forward logistic regression procedure was done, two items remained in the final model: item # 6 ("Abuser injured or killed pet") and race of the partner (white or person of color) discriminated whether or not a woman reported feeling safer after 18 months (Table 6c). Of the 11 women who answered yes to item #6 about the abuser injuring or killing a pet, all 11 women reported feeling safer. Of the 5 women for whom data on safety and race of partner was available, all 5 women whose partners where of color reported feeling safer after 18 months; of the 45 women whose partners were white, 33 (73%) reported feeling safer. Using this model, better safety could be predicted accurately 43 out of 43 times (100% of the cases), but lack of better safety could not be predicted (0 out of 11 times or 0% of the cases). Overall, safety after 18 months could be predicted accurately 80% of the time based on this model. The Chi-Square for the model was 13.41 with 2 degrees of freedom, which was significant at the .001 level.

Table 6c

Logistic Regression: Women's Interview Risk Factors and Safety

| | Safety — Better or Not Better | | |
|--------------------------------|-------------------------------|------------|----------|
| Risk Factor | Beta | Odds Prob. | Ratio |
| Abuser injured or killed a pet | 9.26 | .42 | 10537.90 |
| Race of partner | 9.31 | .42 | 11066.68 |

As indicated above, one control variable, race of the partner, was included in the logistic regression model predicting safety. When only data for women whose partners were white were

examined, no significant relationships existed between risk factors and safety. Logistic regression completed with only women with white partners resulted in the same risk factor (abuser injured or killed pet) in the model. Because safety data were available for only 5 women with partners of color, it was not feasible to examine the relationships with Fisher Exact Test or to undertake logistic regression analysis with this small number of cases.

None of the other control variables, which included client age and race and partner age, were found to be related to safety. Chi square or Fisher Exact Tests comparing race of the client and race of the partner to safety did not result in significant relationship. T-tests comparing the ages of clients or partners where greater safety was reported in the relationship compared to relationships where greater safety was not present resulted in no significant differences. None of the control variables, other than race of the partner, entered into the logistic regression model to predict safety.

Well-Being

Women’s Well Being (Without Children). Sixty-two women responded to the six well being items that did not include relationships to children. T-tests were used to determine if this well being score was higher when a risk factor was reported as being present in a relationship compared to when the factor was not present (see tables 7a and 7b). No risk factors from among the 12 factors that related to the last three months nor the 13 factors that related to ever being present in the relationship were related to this measure of well being. Unexpectedly, the well being score was somewhat higher if the abuser had threatened or tried to commit suicide ($t=1.91$; $p=.06$); but this difference did not achieve the level of significance adopted for this study.

Table 7a

Relationship between Interview Risk Factors and Non-parental Well-Being (n=61)

| Risk Factors—last 3 months | Factor Absent | | Factor Present | | t-value | prob |
|---|---------------|-----------------------|----------------|-----------------------|---------|------|
| | Number | Mean Well-Being Score | Number | Mean Well-Being Score | | |
| 1. Violence happening more often. | 22 | 4.73 | 39 | 4.26 | 1.06 | .29 |
| 2. Violence getting more severe. | 16 | 4.31 | 44 | 4.43 | .24 | .81 |
| 3. Victim more afraid of abuser. | 20 | 4.60 | 42 | 4.36 | .54 | .61 |
| 4. Victim trying to separate from abuser. | 23 | 4.17 | 39 | 4.58 | .93 | .34 |
| 5. Victim try to protect abuser from authorities. | 44 | 4.30 | 17 | 4.71 | .87 | .40 |
| 6. Abuser try to limit victim contact with others. | 29 | 4.10 | 33 | 4.72 | 1.50 | .14 |
| 7. Abuser have problem with alcohol. | 17 | 4.12 | 45 | 4.56 | .93 | .37 |
| 8. Abuser using street drugs. | 39 | 4.49 | 23 | 4.35 | .32 | .37 |
| 9. Abuser have access to a gun. | 28 | 4.11 | 33 | 4.70 | 1.39 | .18 |
| 10. Abuser feel badly about violence toward victim. | 26 | 4.34 | 36 | 4.36 | .41 | .67 |
| 11. Abuser experiencing unusually high stress. | 34 | 4.38 | 28 | 4.50 | .28 | .79 |
| 12. Abuser obsessed/preoccupied with victim. | 19 | 4.47 | 43 | 4.42 | .12 | .90 |

Table 7bRelationship between Interview Risk Factors and Women's Well-Being (n=62)

| Risk Factors—ever | Factor Absent | | Factor Present | | t-value | prob |
|--|---------------|-----------------------|----------------|-----------------------|---------|------|
| | Number | Mean Well-Being Score | Number | Mean Well-Being Score | | |
| 1. Abuser injured victim so badly that required medical attention. | 46 | 4.52 | 16 | 4.19 | .69 | .49 |
| 2. Abuser threatened to kill victim. | 33 | 4.45 | 29 | 4.41 | .10 | .92 |
| 3. Abuser assaulted victim while pregnant. | 46 | 4.30 | 16 | 4.81 | 1.21 | .24 |
| 4. Abuser threatened/forced victim to have sex. | 26 | 4.08 | 36 | 4.69 | 1.46 | .15 |
| 5. Abuser choked victim. | 34 | 4.38 | 28 | 4.50 | .28 | .77 |
| 6. Abuser threatened to use gun against victim. | 38 | 4.34 | 24 | 4.58 | .56 | .58 |
| 7. Abuser used gun or other weapon against victim. | 47 | 4.49 | 15 | 4.27 | .45 | .66 |
| 8. Victim sought outside help because of abuse. | 27 | 4.04 | 35 | 4.74 | 1.61 | .11 |
| 9. Abuser been through alcohol or drug victim. | 25 | 4.16 | 37 | 4.62 | 1.08 | .28 |
| 10. Abuser has history of violence toward others. | 16 | 4.00 | 46 | 4.59 | 1.23 | .22 |
| 11. Abuser committed non-violent crimes. | 30 | 4.43 | 32 | 4.44 | .01 | .99 |
| 12. Abuser injured or killed a pet. | 49 | 4.37 | 12 | 4.75 | .71 | .47 |
| 13. Abuser threatened/tried to commit suicide. | 32 | 4.06 | 29 | 4.86 | 1.91 | .06 |

Stepwise multiple linear regression was calculated to determine what factors, if any, were significant in predicting this well being score. A significant regression equation was found [$F(1,53)=4.26$, $p=.04$], with an R^2 of .07. This well being score was generally higher if the abuser had ever threatened or tried to commit suicide. Table 7c summarizes relevant statistics.

Table 7cStepwise Multiple Regression: Women's Interview Risk Factors and Women's Well Being Score (Not Including Items Related to Children)

| Risk Factors | Well Being Score | | |
|--|------------------|----------------|-------------------------|
| | Beta | Standard Error | Significance of t score |
| Abuser ever threatened/tried to commit suicide | .90 | .44 | .02 |

Women's Well Being (With Children). Fifty women responded to the nine well being items, three of which included relationships to children. T-tests were used to determine if this well being score was higher when a risk factor was reported as being present in a relationship compared to when the factor was not present (see tables 8a and 8b). No risk factors from among the 12 factors that related to the last three months were related to this measure of well being. When examining the 13 factors that related to ever being present in the relationship, the well being score was unexpectedly higher if the abuser had threatened or tried to commit suicide ($t=2.45$; $p=.02$).

Table 8aRelationship between Interview Risk Factors and Overall Well-being (n=50)

| Risk Factors—last 3 months | Factor Absent | | Factor Present | | t-value | prob |
|--|---------------|-----------------------|----------------|-----------------------|---------|------|
| | Number | Mean Well-Being Score | Number | Mean Well-Being Score | | |
| 1. Violence happening more often. | 19 | 6.95 | 30 | 6.80 | .21 | .84 |
| 2. Violence getting more severe. | 14 | 6.79 | 35 | 6.99 | .13 | .90 |
| 3. Victim more afraid of abuser. | 17 | 7.12 | 33 | 6.76 | .50 | .62 |
| 4. Victim trying to separate from abuser. | 19 | 6.53 | 31 | 7.09 | .81 | .43 |
| 5. Victim trying to protect abuser from authorities. | 37 | 6.62 | 12 | 7.50 | 1.49 | .14 |
| 6. Abuser try to limit victim contact with others. | 25 | 6.52 | 25 | 7.24 | 1.00 | .30 |
| 7. Abuser have problem with alcohol. | 14 | 6.98 | 36 | 6.86 | .09 | .93 |
| 8. Abuser using street drugs. | 32 | 6.88 | 18 | 6.89 | .02 | .90 |
| 9. Abuser have access to a gun. | 22 | 6.55 | 27 | 7.11 | .81 | .43 |
| 10. Abuser feel badly about violence toward victim. | 20 | 7.35 | 30 | 6.57 | 1.13 | .26 |
| 11. Abuser experiencing unusually high stress. | 25 | 6.44 | 25 | 7.32 | 1.30 | .20 |
| 12. Abuser obsessed/preoccupied with victim. | 14 | 6.78 | 36 | 6.91 | .17 | .85 |

Table 8bRelationship between Interview Risk Factors and Overall Well-Being (n=50)

| Risk Factors—ever | Factor Absent | | Factor Present | | t-value | prob |
|--|---------------|-----------------------|----------------|-----------------------|---------|------|
| | Number | Mean Well-Being Score | Number | Mean Well-Being Score | | |
| 1. Abuser injured victim so badly that required medical attention. | 39 | 6.85 | 11 | 7.00 | .19 | .85 |
| 2. Abuser threatened to kill victim. | 27 | 6.89 | 23 | 6.87 | .03 | .98 |
| 3. Abuser assaulted victim while pregnant. | 35 | 6.63 | 15 | 7.47 | 1.13 | .26 |
| 4. Abuser threatened/forced victim to have sex. | 21 | 6.38 | 29 | 7.24 | 1.26 | .22 |
| 5. Abuser choked victim. | 29 | 6.83 | 21 | 6.95 | .18 | .85 |
| 6. Abuser threatened to use gun against victim. | 30 | 6.70 | 20 | 7.15 | .64 | .53 |
| 7. Abuser used gun or other weapon against victim. | 38 | 6.95 | 12 | 6.67 | .35 | .72 |
| 8. Victim sought outside help because of abuse. | 21 | 6.14 | 29 | 7.41 | 1.74 | .09 |
| 9. Abuser been through alcohol or drug victim. | 21 | 6.57 | 29 | 7.10 | .77 | .45 |
| 10. Abuser has history of violence toward others. | 15 | 6.13 | 35 | 7.20 | 1.45 | .15 |
| 11. Abuser committed non-violent crimes. | 24 | 6.83 | 26 | 6.92 | .13 | .89 |
| 12. Abuser injured or killed a pet. | 39 | 6.82 | 10 | 7.10 | .32 | .75 |
| 13. Abuser threatened/tried to commit suicide. | 28 | 6.21 | 21 | 7.76 | 2.45 | .02* |

*Significant at the .05 level or higher

Stepwise multiple linear regression was calculated to determine what factors, if any, were significant in predicting the well being score that included perceptions of the women's relationship with their children. A significant regression equation was found [$F(1,43)=6.56, p=.01$], with an R^2 of .13. This well being score was generally higher if the abuser had ever threatened or tried to commit suicide. Table 8c summarizes relevant statistics.

Table 8c

Stepwise Multiple Regression: Women’s Interview Risk Factors and Women’s Well Being Score (Including Three Items Related to Children)

| Risk Factors | Well Being Score | | |
|--|------------------|----------------|-------------------------|
| | Beta | Standard Error | Significance of t score |
| Abuser ever threatened/tried to commit suicide | 1.80 | .70 | .01 |

Control Variables

None of the control variables, which included client age and race and partner age and race, were found to be related to either of the measures of well being. T-tests comparing measures of well being for white women and their partners to women and partners of color did not result in significant differences. Pearson correlations comparing the ages of clients or partners to measures of well being resulted in no significant relationships. None of the control variables entered into the multiple linear regression models to predict the two measures of well being

Part Three: Discussion of Risk Factors and Outcomes

Recidivism

Of the 25 risk factors that the Women’s Coalition used to assess for dangerousness, two factors were most significantly associated with recidivism. Factor #1, abuser had seriously injured the victim, was associated with recidivism on a factor-by-factor basis after 6 months and 12 months, and it entered into the logistic regression model for predicting recidivism after 6 months. This factor related to serious injury was present in 51 of 124 (41%) of the relationships in 1996 and 1997 and in 56 of 155 (36%) relationships when 1998 data was added related to recidivism after 6 months. After both 6 months and 12 months, recidivism was over 10% more likely to have occurred if this factor was present than was the case for all partners in the sample.

Factor #6, abuser had killed or injured a pet, was significantly related to recidivism after 12 and 18 months on a factor-by-factor basis and was the only factor to enter into the logistic regression model to predict recidivism after 12 and 18 months. This risk factor was present in relatively few relationships (23 of 124 relationships or 19%), but 78% of partners who had injured or killed a pet had recidivated after 12 months and 83% of partners who had injured or killed a pet had recidivated after 18 months. This compares to a 53% recidivism rate for all 124 partners after 12 months and a 62% recidivism rate for all partners after 18 months.

Psychological and Physical Abuse

Several risk factors identified in the follow up interview with women were related to abuse. If the abuser had ever threatened or forced the victim to have sex, abuse was likely to be greater. This factor was related to the psychological, physical, and total abuse scores on a factor-by-factor

basis and entered into the linear regression model to predict the psychological and total abuse scores. The abuser had threatened or forced sex in 25 of the 61 relationships (41%) for which abuse data was available, and abuse scores averaged 33-47% higher when this factor was present than when it was absent.

Abuse scores were also higher if the violence in the relationship was reported by the women as “getting more severe” in the last three months. This factor was related to psychological, physical, and total abuse scores on a factor-by-factor basis and was predictive of psychological and total abuse in the linear regression models. This factor was present in 43 of 61 relationships (70%), and abuse scores were 25-43% when the factor was present in a relationship than when it was absent.

If the abuser had ever injured the victim so badly that medical attention was required, this factor was predictive of physical abuse and consequently affected the total abuse score. This factor was reported as present in 16 of 61 relationships (26%), and the physical abuse score was 41% higher when this factor was present than when it was absent. While the medical attention risk factor was not significantly related to any abuse score on a factor-by-factor basis, it was the only factor in the linear regression model for predicting the physical abuse score, and it was one of three factors in the model predicting the total abuse score.

One factor, examining whether the abuser had ever threatened or tried to commit suicide, had an unexpected ability to predict abuse scores. Although not significantly related to any abuse score on a factor-by-factor basis, psychological abuse scores were 30% higher ($p=.07$) for the 32 women who were in a relationship where the abuser had NOT threatened or tried to commit suicide. This factor entered into the linear regression model for predicting both psychological and total abuse.

Safety

None of the 25 risk factors was significantly related to increased safety in a relationship on a factor-by-factor basis. However, all (100%) of the 11 women who reported that the abuser had ever injured or killed a pet unexpectedly reported feeling safer 18 months later ($p=.06$). This factor was the only risk factor that was included in the logistic regression model to predict safety.

Safety was the only outcome that identified any relationship with the control variables, which included woman's age and race and partner's age and race. All five (100%) of the women who had partners of color reported feeling safer after 18 months, compared to 33 of the 45 (73%) of women with white partners. Race of the partner was not significantly related to safety using the Fisher's Exact Test ($p=.24$), but was included in linear regression model to predict safety.

Well Being

Only one risk factor was related to either of the measures of well being (one that included relationships with children and one that did not). Both well being scores were higher if the abuser was reported as ever threatening or trying to commit suicide; the score was significantly higher for well being when relationships with children were included, but just missed statistical significance ($p=.06$) with the other well being score. This same factor was included in the linear model to predict either measure of well being. Unexpectedly, both measures of well being were higher if the abuser had ever threatened or tried to commit suicide.

Conclusions on Risk Factors Affecting Outcomes

Several risk factors were related to program outcomes, with a sometimes unexpected or paradoxical effect. Negative program outcomes were most associated with increased severity of violence and serious injury of the victim. If the abuser had seriously injured the victim, he was more likely to recidivate. If violence was getting more severe in the last three months, both psychological and physical abuse scores were higher for the victim. If a victim had ever been injured so badly that medical attention was required, physical and total abuse were higher.

The abuser killing or abusing a pet had a paradoxical effect on outcomes. This factor was relatively less likely to be present in a relationship (slightly less than 20% of cases) but was strongly associated with two program outcomes. The presence of this factor was significantly associated with recidivism after 12 and 18 months. Unexpectedly, all eleven of the women who reported that their partner had injured or killed a pet also reported feeling safer 18 months after he started the non-violence program.

The abuser ever threatening or trying to commit suicide had an unexpected effect on two program outcomes. If the abuser was reported as ever threatening or trying to commit suicide, 1) psychological and total abuse scores were lower, and 2) well being scores were higher. The available data does not provide insight into the reason for these unexpected relationships.

An important finding of this study is that relatively few risk factors and demographic variables were related to any of the program outcomes. Only 3 of 25 risk factors used for assessing dangerousness by the Women's Coalition were associated with recidivism after 6, 12, or 18 months. This means that 22 factors were neither related to the three measures of recidivism on a factor-by-factor basis nor were predictive of recidivism after these three time periods in a logistic regression model. Only 4 of the 25 risk factors included in the women's questionnaire were associated with any measures of abuse, safety, or well being, meaning that the other 21 risk factors were unrelated to these program outcomes on either a factor-by-factor basis or in a regression model.

Additionally, demographic variables that served as controls in this study were minimally related to program outcomes. Client's age and race and partner's age were unrelated to any of the program outcomes included in this study. Partner's race was unrelated to recidivism, abuse, and well being. The only statistically significant relationship was that partner's race was predictive in safety in a logistic regression model, but the small number of men in this sample (5) suggests that this may not be a meaningful relationship in and of itself.

Limitations of this Study

Several limitations are inherent in this study. First, both samples are limited and therefore generalization is a concern. The sample related to recidivism included 124 women at 12 and 18 months and 155 women at 6 months. Since all of these women sought assistance at the Women's Coalition, these relationships may have included violence that was more severe and relationships that were more troubled than a "representative" group of domestic violence relationships. The high recidivism rate for the partners provides some support for this concern. In fact, the level of recidivism was higher for this group than for the larger sample of men who were seen at DAIP during the time period of this study. The sixty-two women who responded to the women's questionnaire related to risk factors and abuse, safety, and well being represented only about 15% of the women who were sought for interviews. It is impossible to know if the women who completed the interview are similar to those who could not be interviewed.

The risk factors used to examine the relationship to recidivism were different than those used to examine the relationship to abuse, safety, and well being. The 25 risk factors addressed in the assessment undertaken by the Women's Coalition, and therefore examined in relation to recidivism, mostly addressed whether the risk factors were ever present in the relationship and were collected shortly after the women sought assistance from the Coalition. The women's questionnaire included an assessment of whether or not 12 risk factors had been present in the 18-21 months prior to the woman's partner becoming involved in the men's non-violence classes and whether or not 13 other factors had ever occurred in the relationship prior to the partner's involvement in the classes. Despite the differences in time frames, the risk factors themselves were quite similar.

An additional limitation relates to the reliability and validity of the outcome measures. Recidivism outcomes are based on secondary data and beyond the direct scrutiny of the researchers. The measures of safety and well-being have content and face validity, but no information is available on reliability and on construct and criterion validity. One study provides indications of the reliability and validity for the measures of abuse (Shepard & Campbell, 1992).