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**Author(s):                   Stephanie Riger, Susan Staggs**

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# Final Report

## **The Impact of Intimate Partner Violence on Women's Labor Force Participation** *Submitted to the National Institute of Justice*

Stephanie Riger, Ph.D., Principal Investigator\*

Susan Staggs, M. A., Research Assistant

With the assistance of April Howard, M. A., Gillian Mason, M. A., Susan Long, B. A.,  
and Paul Schewe, Ph.D.

Address: Department of Psychology  
University of Illinois at Chicago  
1009 Behavioral Sciences Building, Mail Code 285  
1007 W. Harrison Street  
Chicago, IL 60607-7137

Phone: 312-413-2300

Fax: 312-413-4122

Email: [sriger@uic.edu](mailto:sriger@uic.edu)

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# Table of Contents

1.....	<b>Abstract.....</b>	<b>1</b>
Research Goals .....		1
Research Design & Methodology .....		1
Key Research Results.....		1
2.....	<b>Executive Summary.....</b>	<b>2</b>
Introduction .....		2
Study Background.....		3
Methodology.....		3
Selected Key Findings .....		3
Employment Stability Among Abused and Nonabused Women.....		3
Work/Welfare Status Among Abused and Nonabused Women .....		4
Health Problems Among Abused and Nonabused Women.....		6
Welfare Policy Implications .....		8
Implications for Service Providers.....		9
Implications for Law Enforcement.....		9
Implications for Research.....		9
Implications for Theory.....		10
3.....	<b>Chapter 1: Project Description</b>	<b>11</b>
Overview .....		11
The Context of the Study .....		11
Welfare Reform .....		11
Welfare Reform and Economic Well-Being.....		11
Domestic Violence and Employment .....		11
Research Goals .....		13

4.....	<b>Chapter 2: Scope and Methodology</b> .....	<b>15</b>
Overview .....		15
Research Design.....		15
Sample Selection .....		15
Sampling Procedures.....		16
Response Rates and Attrition Analysis.....		16
Sample Characteristics .....		17
Data Weighting.....		18
Data Sources .....		18
Informed Consent Process.....		18
Interview Process.....		19
Measures.....		19
5.....	<b>Chapter 3: Prevalence and Univariate Analyses of Key Variables</b> .....	<b>27</b>
Introduction .....		27
Abuse .....		27
Sociodemographic Factors .....		27
Human Capital .....		28
Health.....		28
Social Support and Support from the Welfare Office.....		29
Mothering .....		29
Financial Hardship, Continuous Welfare Receipt, and Transportation Problems.....		29
Unemployment Rate .....		30
What Was the Prevalence of Childhood, Lifetime and Recent Abuse at Wave 1? .....		30
What Was the Economic Status of the IFS Sample at Wave 1? .....		32
What Obstacles to Employment did Women Face at Wave 1? .....		35
Was the Number of Employment Obstacles Associated with Economic Status at Wave 1? .....		36
How Does Economic Status Change over a Three-year Period?.....		37
How Do Employment Obstacles Change Over a Three-Year Period? ...		37

How Do Abuse Patterns Over Time Affect Employment Obstacles and Economic Status? .....	39
Patterns of Abuse and Employment Obstacles .....	40
Patterns of Abuse and Economic Status .....	41
<b>6..... Chapter 4: Factors Associated with Lifetime History of Domestic Violence and Sexual Assault Victimization .....</b>	<b>43</b>
Introduction .....	43
The Current Research.....	44
Analysis .....	44
What Factors Were Associated with a Lifetime History of Domestic Violence and Sexual Assault?.....	44
Discussion .....	46
<b>7..... Chapter 5: The Relationship of Change in Economic Status and Abuse .....</b>	<b>48</b>
Introduction .....	48
What Is the Prevalence of Work/School Abuse Over a Three-Year Period? .....	49
Is Getting a Job Associated with a Change in Abuse? .....	50
Is Stopping Work Associated with a Change in Abuse? .....	50
Is Going on Welfare Associated with a Change in Abuse? .....	51
Is Going off Welfare Associated with a Change in Abuse? .....	51
Is Experiencing Abuse Associated with a Change in Employment in the Future? .....	52
Discussion .....	52
<b>8..... Chapter 6: Intimate Partner Violence and Other Obstacles to Employment Stability Over Three Years.....</b>	<b>54</b>
Introduction .....	54
Intimate Partner Violence and Employment Among Women on Public Assistance .....	54
Other Work-Related Factors .....	55
The Current Study.....	56
What Factors Are Associated with Work Stability Over a Three-Year Period? .....	56
Discussion .....	59
<b>9..... Chapter 7: Effects of Abuse on Health and Employment .....</b>	<b>61</b>

Introduction .....	61
Theoretical Considerations .....	61
Welfare Reform and Intimate Partner Violence .....	61
Prevalence of intimate partner violence and health problems among poor women .....	62
Effects of abuse on health among poor women.....	62
Abuse and health problems as obstacles to employment stability .....	63
The Current Study.....	64
What Patterns of Abuse Occurred Over Time? .....	64
How Did Abuse Patterns Affect Employment Stability?.....	65
How Did Abuse Patterns Affect Health Problems? .....	65
Does Health Mediate the Relationship Between Abuse and Employment? .....	68
Discussion .....	71
<b>10.....</b>	<b>Chapter 8: Conclusions and Implications.....</b>
	<b>Error! Bookmark not defined.</b>
Welfare Policy Implications .....	<b>Error! Bookmark not defined.</b>
Implications for Service Providers.....	<b>Error! Bookmark not defined.</b>
Implications for Law Enforcement.....	<b>Error! Bookmark not defined.</b>
Implications for Research.....	<b>Error! Bookmark not defined.</b>
Implications for Theory.....	<b>Error! Bookmark not defined.</b>
<b>11.....</b>	<b>References. Error! Bookmark not defined.</b>
<b>12.....</b>	<b>Appendix A: Methodological Issues in the Study of Intimate Partner Violence and Economic Self-Sufficiency .....</b>
	<b>Error! Bookmark not defined.</b>
<b>13.....</b>	<b>Appendix A: Methodological Issues in the Study of Intimate Partner Violence and Economic Self-Sufficiency .....</b>
	<b>Error! Bookmark not defined.</b>
Measuring Intimate Partner Violence.....	<b>Error! Bookmark not defined.</b>
Comparison of Intimate Partner Violence Rates.....	<b>Error! Bookmark not defined.</b>
Collecting Data on Intimate Partner Violence.....	<b>Error! Bookmark not defined.</b>
Differences in the Reporting of Intimate Partner Violence as a Function of Introduction of Intimate Partner Violence Items.....	<b>Error! Bookmark not defined.</b>

Differences in Reporting of Intimate Partner Violence as a Function of Survey Administration Mode. **Error! Bookmark not defined.**

Intimate Partner Violence Measurement and Employment Stability **Error! Bookmark not defined.**

How well do the common eight items predict employment stability? **Error! Bookmark not defined.**

How well do the MMS and WES predict employment stability? **Error! Bookmark not defined.**

Discussion ..... **Error! Bookmark not defined.**

14. .... **Appendix B: Description of Studies of Intimate Partner Violence and Welfare Reform** **Error! Bookmark not defined.**

15. .... **Appendix C: Prevalence of Abuse in Studies of Intimate Partner Violence and Welfare Reform** **Error! Bookmark not defined.**

16. .... **Appendix D: Relationship of Abuse to Economic Status in Studies of Intimate Partner Violence and Welfare Reform** **Error! Bookmark not defined.**

# List of Exhibits

17.....	Exhibit i. Percentage of months worked across waves for abused and nonabused women.....	4
18.....	Exhibit ii. Work/Welfare status at each wave for abused and nonabused women.....	4
19.....	Exhibit iii. Health problems at each wave for abused and nonabused women .....	6
20.....	Exhibit 2-1. IFS survey response rates .....	16
21.....	Exhibit 2-2. Demographic characteristics of the sample (n = 1311 unless otherwise noted).....	17
22.....	Exhibit 2-3. Items used to measure intimate partner violence at each wave .....	23
23.....	Exhibit 3-1. Prevalence of intimate partner violence as measured by the 21-item index at Wave 1(N = 1311) .....	32
24.....	Exhibit 3-2. Economic status at Wave 1.....	34
25.....	Exhibit 3-3. Prevalence of obstacles among IFS women at Wave 1 (N = 1309).....	35
26.....	Exhibit 3-4. Mean differences in income and number of months worked as a function of number of obstacles .....	36
27.....	Exhibit 3-5. Work/Welfare status for each year of the study .....	37
28.....	Exhibit 3-6. Prevalence of obstacles to employment at each wave.....	39
29.....	Exhibit 3-7. Sociodemographic indicators as a function of patterns of intimate partner violence .....	40
30.....	Exhibit 3-8. Employment indicators by patterns of intimate partner violence .....	42
31.....	Exhibit 4-1: Logistic Regression Analyses: Comparison of Factors Associated with Domestic Violence and Sexual Assault .....	46



32.....	Exhibit 5-1. Prevalence of work/school abuse at each wave.....	49
33.....	Exhibit 5-2. Mean change scores and standard deviations for women whose employment status changed by waves and abuse measurement.....	51
34.....	Exhibit 5-3. Mean change scores and standard deviations for women whose welfare status changed by waves and abuse measurement.....	52
35.....	Exhibit 6-1. Regression results predicting work stability across the three interviews.....	58
36.....	Exhibit 7-1. Adjusted means, standard deviations and group differences on health problems and employment stability as a function of abuse pattern.....	66
37.....	Exhibit 7-2. Summary of analysis of covariance results on employment stability and health problems as a function of abuse pattern.....	67
38.....	Exhibit 7-3. Ranges, means and standard deviations for variables included in regression analyses.....	69
39.....	Exhibit 7-4. Summary of regression results testing relationships among abuse, health problems and employment stability.....	70
40.....	Exhibit A-1. Data gathering protocols for three welfare studies of intimate partner violence.....	Error! Bookmark not defined.
41.....	Exhibit A-2. Prevalence of intimate partner violence as assessed by three studies.....	Error! Bookmark not defined.
42.....	Exhibit A-3. Differences in reporting of abuse as a function of survey administration mode.....	Error! Bookmark not defined.
43.....	Exhibit A-4. Common eight items from the MMS and WES.....	Error! Bookmark not defined.
44.....	Exhibit A-5. MMS and WES physical and psychological items.....	Error! Bookmark not defined.
45.....	Exhibit A-6. Employment stability as predicted by the common eight items.....	Error! Bookmark not defined.
46.....	Exhibit A-7. Employment stability as predicted by the MMS and WES.....	Error! Bookmark not defined.
47.....	Exhibit B-1. Descriptions of studies of intimate partner violence and welfare reform.....	Error! Bookmark not defined.

48..... **Exhibit C-1. Prevalence of abuse as reported in studies of intimate partner violence and welfare reform.....** Error! Bookmark not defined.

49..... **Exhibit D-1. Relationship of abuse to economic status in selected studies of welfare recipients**Error! Bookmark not defined.

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- Riger, S., & Staggs, S. L. (2004). Welfare reform, domestic violence and employment: What do we know and what do we need to know? *Violence Against Women*, 10, 1-30.
- Lewis, D. A., Shook, K. L., Stevens, A. B., Kleppner, P., Lewis, J., & Riger, S. (2000). *Work, welfare and well-being: An independent look at welfare reform in Illinois*. Northwestern University: Institute for Policy Research.
- Lewis, D. A., Stevens, A. B., Amsden, L. B., Hasson, K., Slack, K. S., Lee, B. J., Kleppner, P., Lewis, J., & Riger, S., & Goerge, R. (2003). *Preserving the gains, rethinking the losses: Welfare in Illinois five years after reform*. Northwestern University: Institute for Policy Research.

# Abstract

## Research Goals

This study assesses the impact of intimate partner violence (IPV) on labor force participation of welfare recipients and examines whether change in economic status affects violence levels. Throughout this report, we use the terms “intimate partner violence,” “domestic violence,” and “abuse” interchangeably to refer to violence against women by romantic partners. Research participants included 1311 women who had received welfare in Illinois in 1998. At the time of the first of three annual interviews, the typical participant was 31 years old, unmarried, African American, and had three children. A little under a third of women in the sample (29.2%) had experienced intimate partner violence at some time in their lives.

## Research Design & Methodology

This project embedded a study of the impact of violence on labor force participation into a longitudinal panel study of welfare recipients in Illinois (the Illinois Families Study). Participants were interviewed for 70 minutes roughly once a year over a three-year period starting in 1999-2000. The response rate for the first wave of interviews was about 73%. Of those interviewed at Wave 1, 87% were interviewed at Wave 2; 91% of those were interviewed at Wave 3. Measures included assessment of intimate partner violence both at home and at school/work, employment outcomes, and variables related to employment and violence such as mental and physical health and availability of childcare and transportation. T-tests, analysis of variance, chi-square tests, and multiple regression were used to analyze the data.

## Key Research Results

- Recent but not long-past violence is linked to unstable employment over a three-year period. Women who are victims of recent abuse worked fewer months than those not abused or those who suffered abuse only in the past.
- Women who reported at Wave 1 that they had been abused rated their health a year later as poorer and reported a greater need for mental health treatment than non-abused women. Abused women report having more chronic health problems than non-abused women (although this difference did not reach statistical significance). Moreover, abused women reported different types of problems. Women with abusive partners reported more emotional problems and more stress-related health concerns, such as headaches, ulcers and back problems, than did non-abused women.
- Over time, chronic intimate partner violence is associated with poor health, and recent intimate partner violence is associated with unstable employment. Health mediates the relationship between abuse and economic outcomes over time. Our findings suggest that abuse manifests as stress-related mental and physical health problems as long as a year after the abuse has occurred. These health problems then decrease women’s ability to maintain stable employment even as long as two years after the abuse has occurred.

# Executive Summary

## Introduction

The Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA; P. L. 104-193) transformed public assistance from a means-tested federal entitlement program to one that requires recipients to work in order to receive benefits. Domestic violence advocates feared that work requirements might exacerbate abuse in men's attempts to deny women employment and hence independence (Brandwein, 1999; Raphael, 1997, 2001). This study examines the relationship of domestic violence and employment in the context of welfare reform using three years of annual survey findings with the same families. Participants were selected from women receiving public assistance in 1998. Here we provide evidence of the following:

- A little under a third of women in the sample (29.2%) experienced intimate partner violence at some time in their lives.
- Rates of welfare receipt dropped precipitously over the three years. When the sample was drawn in 1998, all women were receiving public assistance. By the third wave of interviews in 2002, that number had dropped to just under 20%.
- The number of women who received income from work increased across the three waves, although employment was precarious among this population. At Wave 3, approximately 30% more women than at Wave 1 had received income from work at some time during the previous year. But the number of women employed at the time of each interview remained relatively stable across the three waves of data collection. Participants worked an average of 18.6 months across three years, and the average participant was employed 45% of the time.
- Childhood exposure to domestic violence is a risk factor for both domestic violence and sexual assault as an adult. However, being abused as a child is associated with experiencing domestic violence but not sexual assault as an adult.
- Domestic violence is one among many obstacles to employment faced by low-income women. As in previous studies, the more obstacles to employment women faced, the less they worked and the less income they received.
- Recent but not long-past violence is linked to unstable employment over a three-year period. Women who are victims of recent abuse worked fewer months than those not abused or those who suffered abuse only in the past.
- Women who reported at Wave 1 that they had been abused rated their health a year later as poorer and reported a greater need for mental health treatment than non-abused women. Although abused women did not report having more chronic health problems than non-abused women, they reported different types of problems. Women with abusive partners reported more emotional problems and more stress-related health problems, such as headaches, ulcers and back problems, than did non-abused women.
- Over time, chronic intimate partner violence is associated with poor health, and recent intimate partner violence is associated with unstable employment. Health mediates the relationship between abuse and economic outcomes over time. Our findings suggest that abuse manifests as stress-related mental and physical health problems as long as a year after the abuse occurred. These health problems then decrease women's ability to work consistently even as long as two years after the abuse occurs.

## Study Background

A key goal of welfare reform was to increase the employment of those receiving public assistance. Advocates of abused women feared that women's entry into the work force would increase domestic violence, perhaps because men would feel threatened by women's greater financial or social independence with work (Raphael, 1997). Conversely (or even simultaneously), employment might increase women's confidence to oppose violence; it might raise women's income and therefore power in the relationship or ability to leave; or it might reduce opportunities for violence simply because women would be away from their partners at a job. It is also possible that abuse might not be related to employment (see Riger & Krieglstein, 2000, for a detailed discussion).

This study explores the relationship of employment and intimate partner violence in the context of welfare reform with a representative sample of 1311 women in Illinois. Under new welfare guidelines, recipients of public assistance are required to work 30-35 hours per week. Illinois is more generous than some states in its definition of work-related activities, including community service, substance abuse treatment, domestic violence counseling, foster parenting, and postsecondary education.

This study was embedded in the Illinois Families Study (IFS), a six-year longitudinal study of welfare recipients. Participants were selected from Cook County (including Chicago) and 8 other counties (including cities and towns of varying sizes and demographic makeup) that together represented 75% of the state's welfare caseload in 1998. At the time of the first interview, the average respondent was 31 years old, unmarried, African American, and had 3 children. When the sample was drawn in 1998, all respondents were receiving public assistance. But by November, 1999, when the first wave of interviews began, only about half of the participants were receiving public assistance. By the time of the third interview, only about 10% of the sample relied on public assistance as their sole income support while another 10% combined both work and welfare. About 60% of the sample was working for pay (and not receiving welfare) while over 20% of the sample neither worked for pay nor received welfare. Those working typically had low-paying jobs with few employer-sponsored benefits.

## Methodology

The first wave of interviews was conducted between November 1999 and September 2000; the second wave in 2001 and the third wave in 2002. The response rate was 72.4% for Wave 1. Of those interviewed at Wave 1, 87% were interviewed at Wave 2; of the latter group, 91% were interviewed at Wave 3. Because the IFS sample was disproportionately drawn from eight non-Cook (Chicago) counties to ensure sufficient numbers of respondents in smaller urban and rural areas, the data were weighted statistically to reflect the correct proportions of public assistance recipients in the combined regions. All analyses in this report use sample weights to adjust for regional stratification and nonresponse rates. Missing data was treated as missing in all analyses.

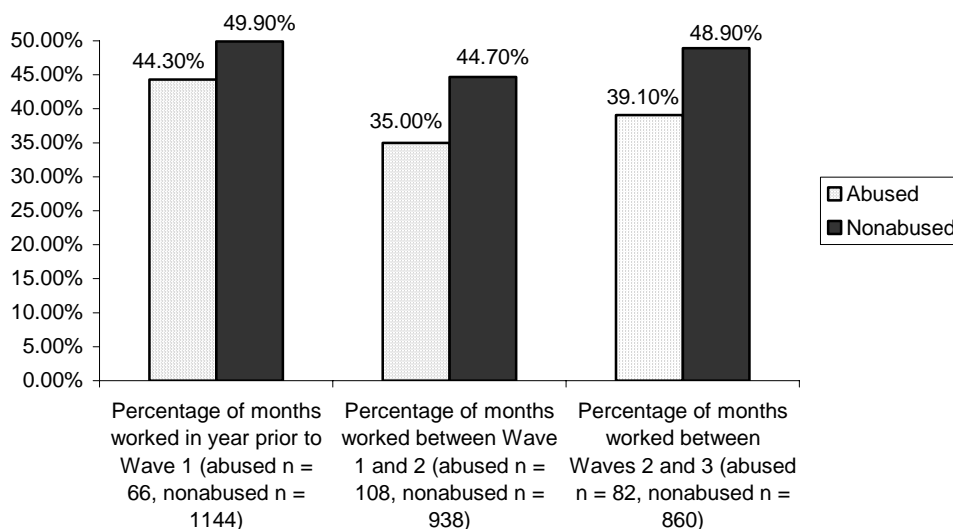
Participants were interviewed for approximately 70 minutes about once a year over about a three-year period. Measures included assessment of intimate partner violence, income and number of months employed, and other health and human capital variables. Measures were taken from other studies of welfare populations when possible so that results in Illinois could be compared with those in other states.

## Selected Key Findings

### Employment Stability Among Abused and Nonabused Women

As shown in Exhibit i, during all three years of the study, abused women worked fewer months than those not abused. This gap increased over the years.

*Exhibit i. Percentage of months worked across waves for abused and nonabused women*

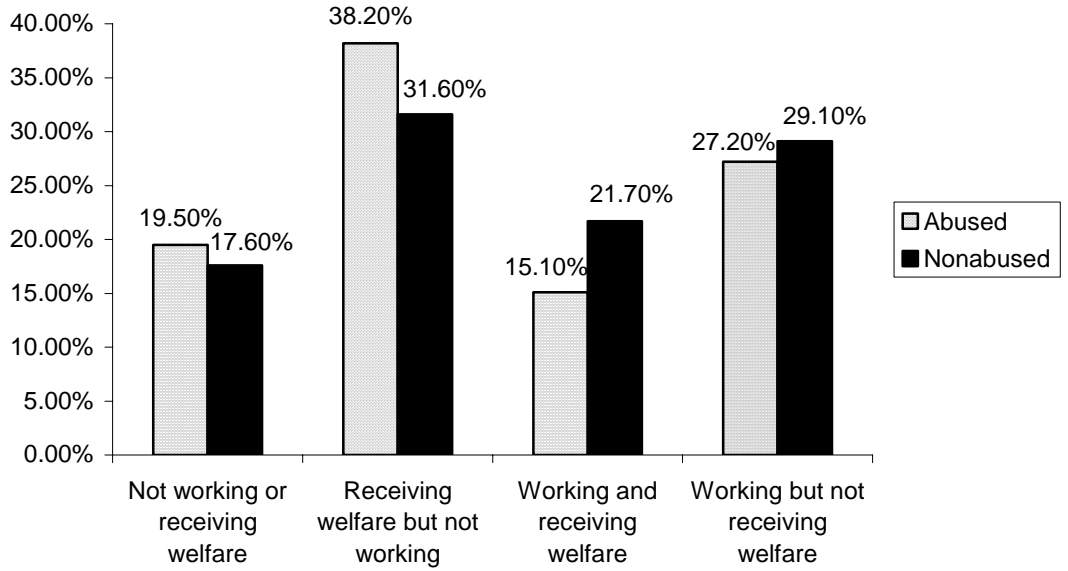


**Work/Welfare Status Among Abused and Nonabused Women**

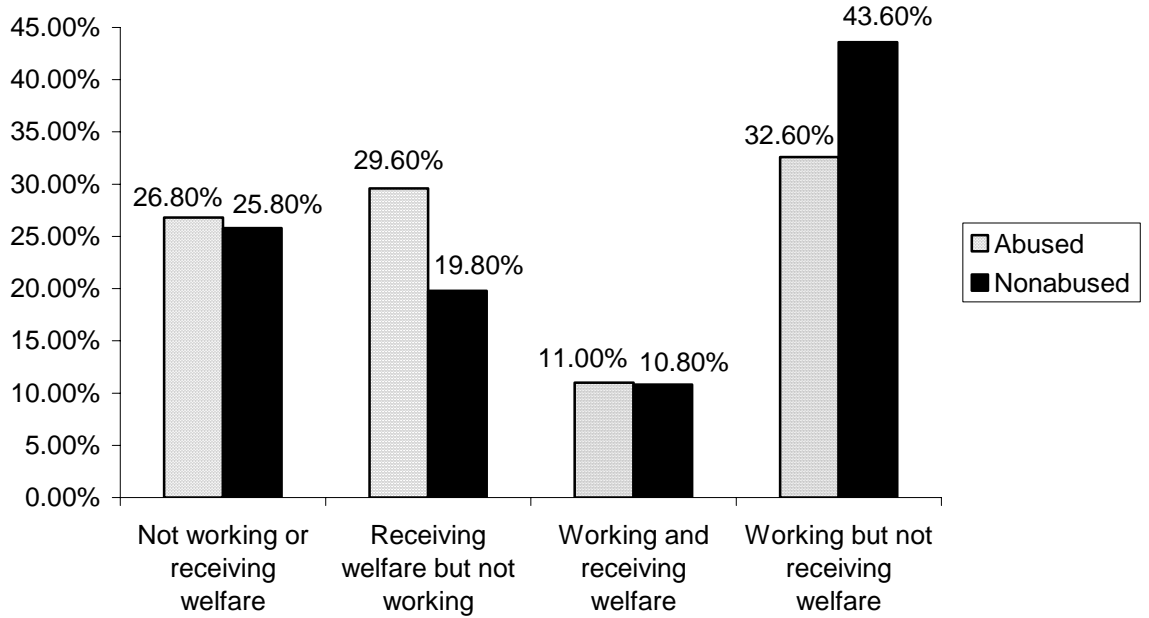
The number of women receiving welfare decreased during each of the three years of the study, and the number of women working (and not receiving welfare) increased. During all three years of the study, however, more abused than nonabused women were receiving welfare and not working, and more nonabused women were supporting themselves solely by working (see Exhibit ii).

*Exhibit ii. Work/Welfare status at each wave for abused and nonabused women*

Work/Welfare Status at Wave 1  
(abused n = 68, nonabused n = 1232)

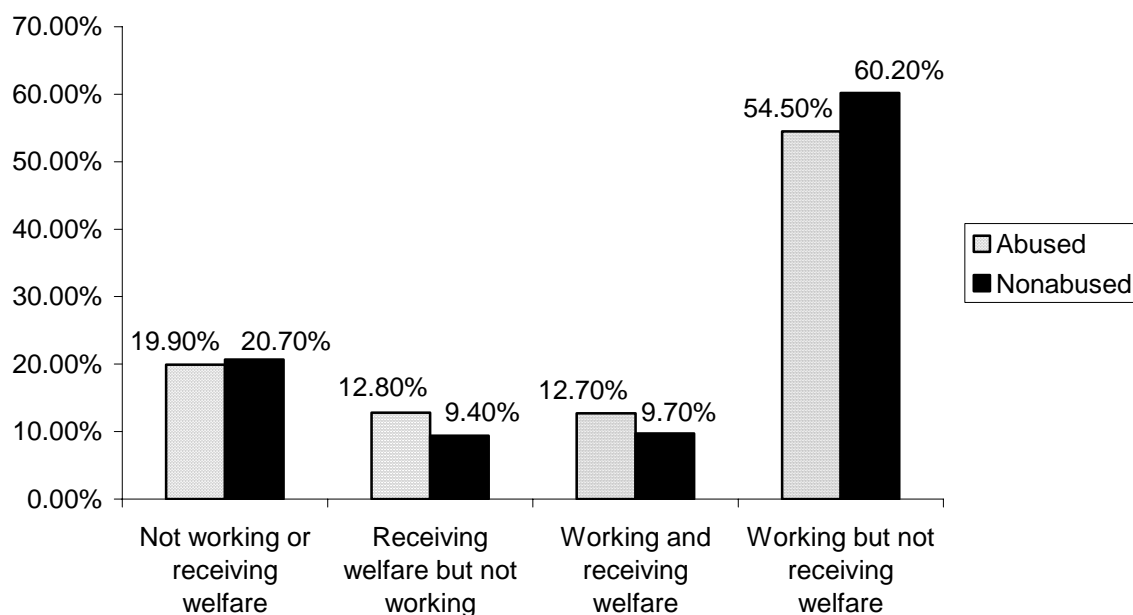


Work/Welfare Status at Wave 2  
(abused n = 111, nonabused n = 966)



Work/Welfare Status at Wave 3  
(abused n = 82, nonabused n = 878)





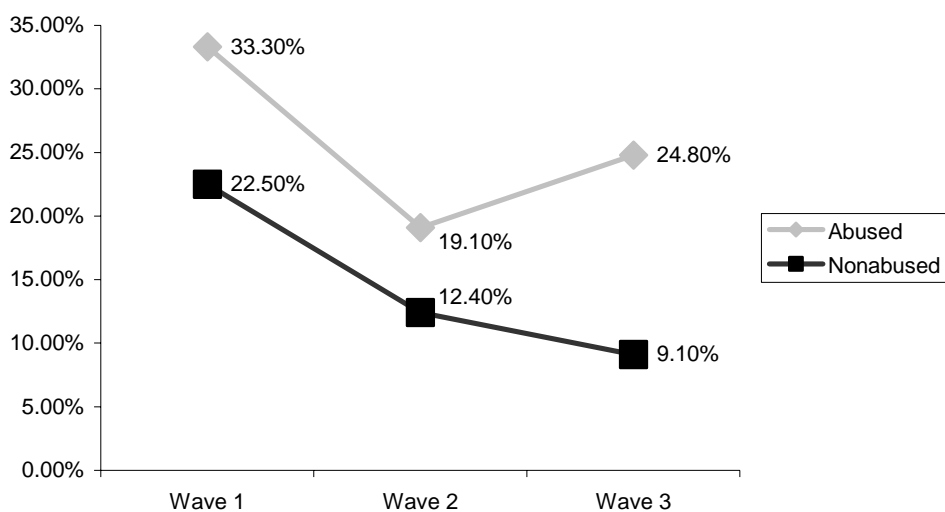
### Health Problems Among Abused and Nonabused Women

During all three years of the study, more abused women reported health problems and a need for mental health services than nonabused women (see Exhibit iii). Rates of depression were particularly high among the abused population, especially in the first two years of the study. These rates declined considerably by the third wave of interviews but over a third of abused women still reported experiencing depression.

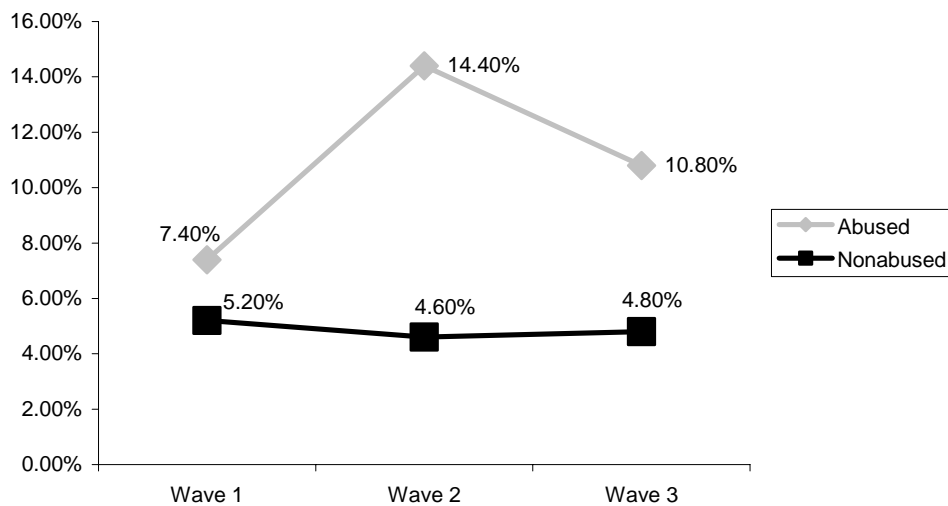
#### *Exhibit iii. Health problems at each wave for abused and nonabused women*

Note: Wave 1 (abused n = 68, nonabused n = 1236); Wave 2 (abused n = 111, nonabused n = 966); Wave 3 (abused n = 82, nonabused n = 881). Numbers used in analyses vary slightly due to missing data.

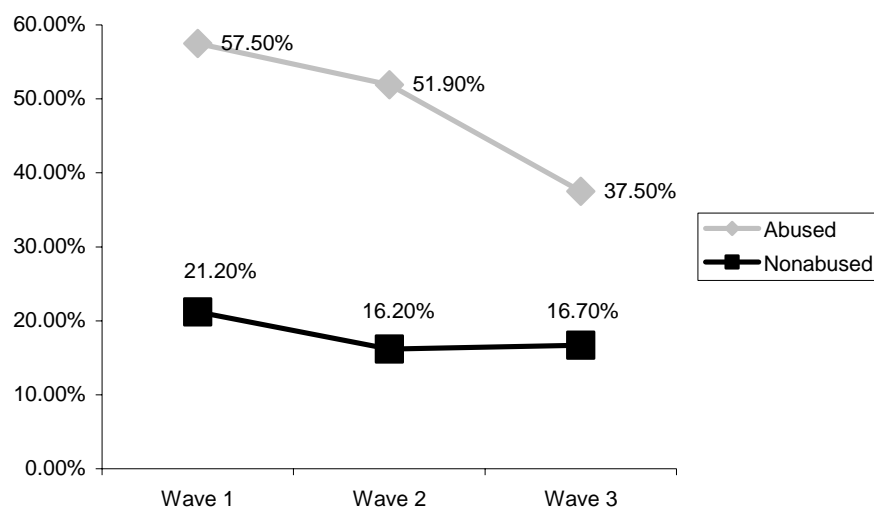
#### Chronic Health Problems that Affect Work



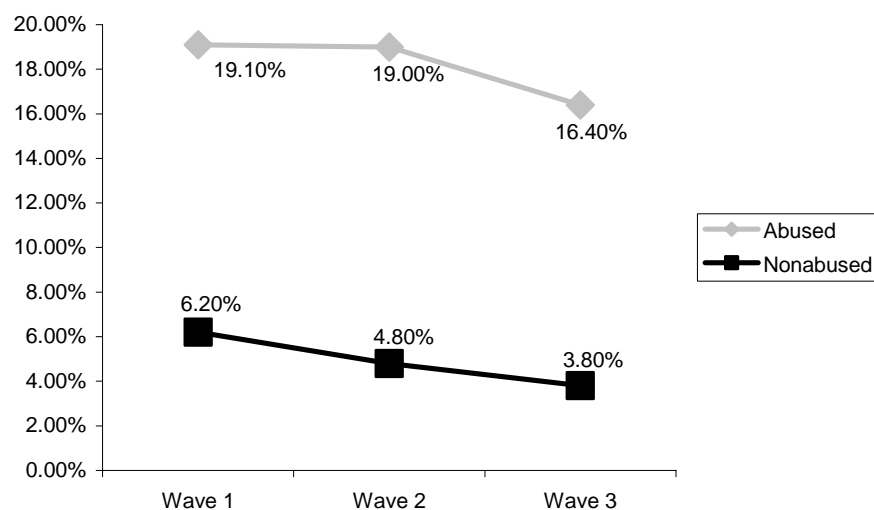
### Self-Rated Poor Health



### Depression



Perceived Need for Mental Health Treatment



## Welfare Policy Implications

- Federal reauthorization of welfare reform legislation should attend to the deleterious impact of abuse on women's ability to sustain work over time. The Family Violence Option (FVO) to the welfare reform legislation was developed in response to concerns that abused women, often trapped in relationships with partners who sabotaged their attempts to work or go to school, would need more time than their peers to meet welfare reform's work requirements. As welfare reform also requires women to seek child support from the fathers of their children, some advocates were concerned that contacting a former abuser for child support might place women at heightened risk for abuse. When states adopt the FVO, they may screen welfare recipients and applicants for domestic violence, refer them for treatment, and allow them flexibility in meeting work and child support enforcement requirements through "good cause" exemptions (Raphael, 1999). Yet few women report domestic violence to welfare caseworkers, and of those who do, few claim exemptions, stating that they want to work and obtain child support (Tolman & Raphael, 2000). As Illinois did not adopt the FVO until July of 2002, the last year of the study, we did not collect data on its use. However, our findings

suggest that intervention through the health care system might be a more effective way to reach victims of abuse. Women may be more likely to disclose abuse to healthcare workers than to welfare caseworkers, so it is critical that abused women have healthcare insurance. The percent of those in the Illinois Families Study with no health insurance coverage increased from 19% at the time of the first interview to 25% at the second interview and 29.2% at the third interview. Few of those working received employer-sponsored benefits. Expanding income eligibility cutoffs for Medicaid coverage for adults and extending the provision of Transitional Medicaid Assistance to a longer time period may help abused women overcome the effects of abuse.

- This study compared reporting of abuse through oral interviews and written questionnaires; more abuse was reported using the latter method. During welfare procedures (and in other settings), women should have the maximum possible privacy in answering questions about whether they are abused.
- The deleterious impact of intimate partner abuse should be taken into account when considering the promotion of marriage as part of the reauthorization of welfare legislation. The promotion of marriage might tie women more firmly to abusive partners, and thus paradoxically interfere with the key goal of welfare reform, employment.

### Implications for Service Providers

- The frequency of recent abuse, although lower in this study than in others, still indicates that large numbers of current or former welfare recipients experience violence from intimate partners. As mentioned above, one route to extending services to women with abusive partners might be through the health care system. But providing services for victims may not prevent or reduce levels of abuse. As welfare rolls drop and as women reach their 5-year time limit on welfare receipt, there is little that distinguishes women who received public assistance from very low-income women in general. Interventions designed to reduce and prevent abuse among all women might be more effective at sustaining employment among those who receive public assistance than interventions aimed solely at women on welfare.
- Women who are victims of abuse also experience a number of other problems, including more childcare concerns, less social support, and higher levels of depression than women who have never been abused, suggesting a need for coordination of services for this population.
- Domestic violence has an impact not only on the women who experience it directly, but also on children who observe it. Exposure to domestic violence as a child is a risk factor in this study for both domestic violence and sexual assault as an adult. Services for children who witness domestic violence might reduce their risk of victimization in the future.

### Implications for Law Enforcement

- Abuse of women is not only an economic issue; it is also an issue of public safety. Lifetime abuse rates found among women in this study indicate that substantial numbers of women suffer abuse. Collaboration among law enforcement, domestic violence and healthcare service providers might help alleviate the negative impact of abuse. In addition, law enforcement should recognize the long-term consequences of exposure to abuse on children when responding to intimate partner violence. Abuse is not only a crime against women who experience it, but it also has consequences for future victimization of children who observe it.

### Implications for Research

- As mentioned above, the findings of this study suggest that women are more likely to report abuse through written questionnaires that they complete by themselves rather than in an oral interview. Allowing women the greatest possible privacy permitted by study resources might

promote more accurate reporting of abuse. In addition, this study suggests that a long time frame (here, as long as three years) is required in order to assess the impact of abuse adequately. Only when we combined all three years of employment together did we find results that did not appear on a year-by-year basis.

- Studies of intimate partner abuse routinely should include measures of health. We found that health problems play an important role as mediators between the effects of abuse and employment. Health problems may be critical to other issues related to abuse, such as whether women are able to effectively care for their children.
- A problem with most quantitative studies of abuse, including this one, is that they are not sufficiently precise about the timing of abuse. That is, we asked about abuse and about employment “in the past year.” We are able to obtain from these data a general idea of whether abuse at one time period is followed by, for example, a decrease in employment in the next time period. But these questions do not allow us to ascertain with greater specificity if abuse immediately followed or preceded employment (or was unrelated in timing) within a particular time period. Using more specific measures of time sequencing in prospective studies might give a more nuanced picture of the timing of abuse and other factors.

### Implications for Theory

- In several areas of this study we compare the predictions of exchange theory, which suggests that an increase in resources will lead to a decrease in abuse, with the backlash hypothesis, which predicts an increase in abuse with greater employment. Results of this study provide more support for the backlash hypothesis.
- Many studies of abuse are atheoretical, providing useful information about particular samples but limited in their generalizability. Theoretical understanding of the dynamics of abuse may be helpful not only to increasing knowledge but also to developing strategies to reduce and prevent such violence.

# Chapter 1: Project Description

## Overview

This project examined the impact of intimate partner violence on labor force participation of current and former welfare recipients and determined whether change in welfare status affected violence levels. The goals were to: 1) assess the impact of violence on employment over time while controlling for other factors (such as ethnicity, physical and mental health, household composition, childcare and transportation) that may also be related to violence and employment; and 2) examine whether change in women's self-sufficiency (e.g., through loss of welfare and/or onset of employment) affects levels of violence. This project embedded a study of the impact of intimate partner violence on women's economic self-sufficiency into a panel study of welfare recipients in Illinois, the Illinois Families Study (IFS). Data for this study came from the first three waves of interviews with a large (1311 women) geographically and ethnically diverse statewide representative sample of women on welfare. Interviews at one-year intervals assessed employment and violence levels, as well as variables related to employment and violence such as mental and physical health and availability of childcare and transportation.

## The Context of the Study

### Welfare Reform

Passage in August 1996 of the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA; P. L. 104-193) is likely the most significant poverty-related policy change we will see in our lifetimes. Formerly a means-tested federal entitlement program, welfare now provides transitory support as its name, Temporary Assistance to Needy Families (TANF), implies. Opponents feared that women already poor would be made destitute by the time limits and family cap provisions in PRWORA. Domestic violence advocates were especially concerned that welfare reform might eliminate a safety net that women use to escape abusive relationships, and that it might exacerbate abuse in men's attempts to deny women employment and hence independence (Brandwein, 1999; Raphael, 1997, 2001).

### Welfare Reform and Economic Well-Being

Welfare reduction, not poverty reduction, was the goal of PRWORA, and in that it has succeeded. Welfare rolls have dropped precipitously across the United States, from 4.4 million families in 1996 to 2.1 million in 2001 (U. S. Department of Health and Human Services, 2001). California, the state with the largest welfare population, saw a 47.8% decline in welfare roles during those years, while the decline in our home state of Illinois was almost 75%.

A key goal of welfare reform was to increase employment of those receiving welfare. Women's work participation has increased significantly post-PRWORA (Kaushal & Kaestner, 2001), although the rate of employment of current and former TANF recipients has leveled and even declined in recent years (U. S. Department of Health and Human Services, 2002). Even before welfare reform, however, many women worked while they received assistance (Harris, 1993). But not only are more poor mothers working outside the home now, they are holding their jobs for a longer time period than before welfare reform (Jones-DeWeever, Peterson, & Song, 2003).

### Domestic Violence and Employment

The Family Violence Option (FVO) to the welfare reform legislation, which allows flexibility for abused women in meeting some requirements, passed because of the fear that violence from intimate partners hindered women's employment. Women's entry into the work force might increase domestic

violence, perhaps because men would feel threatened by women's greater financial or social independence with work (Raphael, 1997). Conversely (or even simultaneously), employment might increase women's confidence to oppose violence; it might raise women's income and therefore power in the relationship or ability to leave; or it might reduce opportunities for violence simply because women would be away from their partner at a job (Riger & Kriegelstein, 2000).

In 2001, Tolman and Raphael summarized what we have learned from studies to date about the relationship of violence and employment. They found inconsistent results and concluded that a long-term perspective is necessary to assess this relationship, as the impact of violence may affect not simply whether or not women work outside the home, but rather whether they are able to sustain employment over time. Violence may also interfere with employment indirectly by inflicting physical injuries and mental health problems. Tolman and Raphael stressed that we must look not only at whether abused women are successful at working, but also at whether working increases the likelihood of their victimization.

Studies since their review continue to yield inconsistent findings (see Exhibits B-1, C-1 and D-1; format for these tables adopted with permission from Tolman & Raphael, 2001). Some find an association between violence and unemployment or less stable employment. Among poor women in Washington State, women abused as adults earned at least 25% less than women who were not abused (Smith, 2001). Similarly, an evaluation of welfare reform in four large cities found that women with higher employment stability were less likely to have experienced recent abuse (Polit et al., 2001). Long-term welfare recipients in Michigan and Texas were more likely to report severe domestic violence than those who had little or no experience with the welfare system (Danziger & Seefeldt, 2002; Romero, Chavkin, Wise, Smith, & Wood, 2002).

But results from other studies are mixed. In the Women's Employment Study, recent domestic violence was not significantly associated with employment when other variables were controlled (Danziger et al., 2000; Tolman & Rosen, 2001). There were no differences in employment between women who had experienced past compared with recent domestic violence, even when they had experienced recent violence in all three years of the study (Danziger & Seefeldt, 2002), although other analyses of these data found that chronic, severe domestic violence was associated with greater reliance on welfare and less reliance on work (Tolman, Danziger, & Rosen, 2002). Combining several indicators into an "estimated need for domestic violence services," Meisel and colleagues (2003) found that being in greater need of services was associated inconsistently with working fewer weeks, lower income, and loss of jobs in two California counties. In one county, abused women worked less while in another county they worked more than women not reporting serious domestic violence.

Some studies of transitions on or off welfare suggest that employment may have a protective effect (Farmer & Tiefenthaler, 1997). Using data collected pre-PRWORA from two randomized evaluations of welfare to work programs, Gibson and her colleagues (2003) found that increased maternal employment (but not increased income) decreased subsequent reports of abuse. Among over 2,000 women studied in three cities, domestic violence decreased when women moved off welfare while it increased among women who left the work force (Votruba-Drzal, Lohman, & Chase-Lansdale, 2002). Among women who had reached time limits on welfare receipt in Utah, those whose cases had been closed because of increased income were about half as likely as those whose cases had been closed due to time limits or for other reasons to experience severe domestic violence in the previous 12 months (Taylor, Barusch, & Vogel, 2000; see also Mancuso & Lindler, 2001).

Complicating this picture, employment may have mixed effects depending on other factors. Analysis of family and household data collected pre-PRWORA found that those employed full time reported less violence than those who worked while receiving welfare benefits (Rodriguez, Lasch, Chandra, & Lee, 2001). Brush (2003) asked women in a Pennsylvania welfare-to-work program whether working affected the physical abuse they experienced. Forty percent of those who were abused reported that abuse started or became worse when they were working. Other forms of interference with work increased also. Yet post-traumatic stress symptoms decreased when women worked. Paradoxically, working may simultaneously aggravate abuse but improve mental health.

Moreover, violence may not affect women's employment directly. Rather, its impact may be mediated by mental health and physical problems, which in turn affect women's ability to work (Murphy, 1997). Women with abusive partners report that domestic violence affects employment by lowering women's self-esteem and confidence (Libbus, Sable, Huneke, & Anger, 1999). Although Tolman and Rosen (2001) found no association between domestic violence and employment in multivariate analyses, they did find that recent victims of violence had higher levels of mental and physical health problems. In a study of poor women in three cities, twenty-five percent of those who remained on welfare reported health problems that interfered with their employment, compared to 11% of former recipients and 8% of nonrecipients (Moffit & Cherlin, 2002). Among those receiving TANF in one California county, two-to three-fifths of the sample reported physical health problems while one fifth reported serious mental health problems (Spiegelman, Fujiwara, Norris & Green, 1999). Poor health interferes with women's ability to get and keep a job (Horwitz & Kerker, 2001; Olson & Pavetti, 1996; Romero, Chavkin, Wise, & Smith, 2003). Among women in Michigan, those with greater depressive symptoms and fear of losing medical benefits were less likely to be employed (Kalil, Schweingruber, & Seefeldt, 2001; see also Romero et al., 2003; Sutherland, Bybee, & Sullivan, 2002).

Poverty is consistently associated with depression in women, perhaps because it inflicts stress and hardships while simultaneously reducing sources of support (Belle & Doucet, 2003; see also Petterson & Friel, 2001). Among African-American and Latina mothers in Chicago, prolonged (but not short) periods of depression were associated with welfare dependency (Lehrer, Crittenden & Norr, 2002). Depression is more frequent among mothers on welfare than among the general population (Coiro, 2001), and among a welfare sample in Illinois, those who reported moderate or severe depressive symptoms were about 43 percent less likely to be employed than those with no or mild symptoms (Lewis, Lee, & Altenbernd, 2001).

## Research Goals

The first goal of this study is to identify the incidence of partner violence among TANF recipients over a three-year period. Much of the research conducted with recipients of welfare to date has focused on populations identified prior to or during the early stages of the implementation of welfare reform policies (Allard et al., 1997; Danziger et al., 1999; Lloyd, 1997). This study identifies the incidence rates of intimate partner violence within the context of welfare reform policies, and during the period in which families begin reaching their time limits on welfare assistance. As the welfare status of our sample respondents changes, we assess whether rates and particular forms of partner violence fluctuate.

The second goal of this study is to examine the impact of partner violence on women's labor force participation over time. The federal Personal Responsibility and Work Opportunity Act of 1996 included strict time limits on receiving public aid and rigid requirements for moving from welfare to work. Violence against women on welfare may severely impede their ability to meet these requirements, as recognized by the Family Violence Option to the welfare reform legislation (Raphael, 1999). Intimate partner violence may prevent women from obtaining or maintaining work or education; it may cause absences from work or school; and it may interfere with women's ability to perform at work or school. In addition, women's loss of welfare and/or onset of employment may change their employment or economic status, which may influence violence levels. Thus the second goal of the study proposed here is to examine whether change in employment/economic status of a woman is related to change in levels of violence against her.

Kalmuss and Straus (1982) used data from a nationally representative sample to examine the relationship of violence and wives' economic dependence on their marital partner, as indicated by whether or not she worked, whether there were children age five or younger at home, and whether the husband earned 75% or more of the couple's income. Women who were highly economically dependent on their marriage experienced more physical abuse from their husbands than women whose dependency was low. Some researchers (e.g., Ehlers, 1991; Johnson, 1995) found that the fewer the wife's resources, the more likely it was that she would return to the abuser. Increasing women's labor



force participation thus may reduce their dependency on their abusive partner, consequently reducing the levels of violence directed against them.

It is also possible that increasing women's economic resources may increase, rather than decrease, violence. Some evidence, such as the higher victimization rates of women who are separated compared to women who are divorced or married suggests that it is the very process of moving toward independence that may exacerbate or even cause men to be violent against a female partner. Women who are separated have an average annual rate of violent victimization from intimates that is three times greater than women who are divorced and thirty times greater than those who are married (Bachman & Saltzman, 1995). Consequently, a man may become more abusive when a woman's resources increase, if she is seen as becoming more independent.

Partial support for this proposition comes from a study that found that income disparities favoring women, rather than overall family resources, predicted men's violence toward their wives (McCloskey, 1996). Also, changing rates of intimate partner homicide are attributed in part to the changing economic status of women (Dugan, Nagin & Rosenfeld, 1997). As women's economic status improves, the rate at which women kill their intimate partners declines (perhaps because increased income enables them to leave the relationship), but not the rate at which women are killed by their partners. Instead, there is some (albeit weak) evidence that women's improved economic status increases rather than decrease women's chances of being victimized.

The cumulative effect of violence against women on welfare may ultimately lead to worse economic outcomes. The findings cited above also raise the question of whether over time, intimate partner violence may erode the economic situations of women, regardless of whether they remain with their partners. Worsened physical or mental health stemming from victimization may reduce employment or earnings, and continued involvement with partners may lessen sources of informal material support among women on welfare. Here we assess the causal direction of the relationships between intimate violence and employment/economic status, taking advantage of lagged values of key measures in the statistical models.

A final goal of this research is to explore the short and longer-term consequences of victimization on the women's employment and economic well-being, as well as their physical and mental health. Recent research has begun to examine the specific consequences of violence on women's self-sufficiency. Eight percent of randomly selected women in a low-income neighborhood in Chicago reported that their boyfriend or husband prevented them from going to school or work in the past 12 months (Lloyd, 1997). About 47 percent of abused women in a welfare-to-work program reported that their intimate partner tried to prevent them from obtaining education or training. Both abused and nonabused women in this sample were discouraged from working by their partners, but women with abusive partners faced active interference (summarized in Raphael & Tolman, 1997). Among women in three urban battered women's shelters who worked or went to school despite being forbidden by their partners, 85 percent missed work because of abuse while 56 percent missed school; 52 percent were fired or quit because of abuse (Riger, Ahrens, Blickenstaff, & Camacho, 1998). In a longitudinal sample of extremely poor women, those who had experienced intimate partner violence in the past 12 months had been employed for fewer hours per week and for fewer months than women who had not experienced violence (Browne, Salomon, & Bassuk, 1999).

Several studies and literature reviews point to the higher prevalence of mental health problems (Jayakody, Danziger, & Pollack, 1998), substance abuse (Danziger et al., 1999), and child and parent health problems (Loprest & Acs, 1995) among welfare recipients compared to the general population or to similar populations not on welfare. However, most of the research on intimate partner violence is retrospective (Edleson, 1999). That is, families who have experienced intimate partner violence are identified, and the presence of various characteristics and circumstances is assessed and compared to a control group. Very little is known about how intimate partner violence affects the risk of poor health outcomes. Here we use a prospective study design to explore this question.

# Chapter 2: Scope and Methodology

## Overview

This study took place within the context of a larger study of welfare reform: The Illinois Families Study (IFS). The IFS focuses on the assessment of workforce attachment, job retention and progression, family stability, and maternal and child well-being, as families transition from welfare to work. The IFS is following, over a six-year period, 1,400 families who were welfare recipients in the fall of 1998. The study is gathering information through annual in-person interviews.

In addition to support from the National Institute of Justice, the first three years of the project were made possible by the Joyce Foundation, the John D. and Catherine T. MacArthur Foundation, the Woods Fund of Chicago, the Annie E. Casey Foundation, the Polk Bros. Foundation, the Searle Fund, the Illinois Board of Higher Education, the Administration for Children and Families, and the National Institute of Child Health and Human Development. We received additional support from the US Department of Education and the Illinois Department of Human Services. Dr. Dan A. Lewis, Ph.D. is the principal investigator of the IFS. Researchers from multiple institutions in Illinois (Northwestern University, the University of Illinois at Chicago, Northern Illinois University, Roosevelt University) are participating in the Illinois Families Study. The principal investigator of this project is also a co-investigator of the IFS. Here we examine the relationship of abuse and employment using the first three years of IFS data.

## Research Design

### Sample Selection

Nine Illinois counties were selected for the study: Cook (Chicago and suburbs), St. Clair (East St. Louis and Suburbs), Peoria, Fulton, Knox, Marshall, Woodford, Tazewell, and Stark. Combined, these nine counties represent over 75% of the Illinois TANF caseload. Cook and St. Clair counties were selected because they represent the counties with the largest shares of TANF recipients in Illinois. Peoria county was selected because it represents the third largest share of TANF recipients in the state and it encompasses smaller urban areas than both Cook and St. Clair counties. Peoria is not intended to be representative of other counties with small and mid-size cities because wide variation exists among other counties with similar population concentrations in Illinois in terms of census indicators and TANF caseload characteristics. The selection of a different county would not have improved the ability to make generalizations about other similar size counties. Inclusion of a smaller county such as Peoria is important because of the hypothesized differences in the existence, access, and quality of services and supports for recipients transitioning from welfare to work (e.g., transportation, health care, job search and training programs) between large urban areas (Chicago) and smaller urban areas.

Most Illinois counties (85%) have populations under 100,000. Thus, the study included the six counties surrounding Peoria county: Fulton, Knox, Marshall, Woodford, Tazewell, and Stark. Combined, these six counties represent approximately 2% of the state's welfare caseload. When the six Peoria ring counties were compared (as a group) to all other counties with populations less than 100,000 in the state, there were minimal differences across a number of welfare caseload characteristics, with the exception of the welfare caseload racial composition. Other small counties in Illinois were more than twice as likely to have African-American welfare recipients than the Peoria ring counties. Peoria county itself had a substantial African-American TANF population, some of

whom resided in the smaller cities within Peoria county. Such areas are not likely to be qualitatively different from the smaller counties surrounding Peoria county in terms of other welfare caseload characteristics.

### Sampling Procedures

The sample was drawn using a stratified random sampling design based on two geographic areas: Cook County and the remainder of the state. For the Illinois Families Study, about 937 cases per stratum or 1,874 total cases were randomly selected. Within each stratum, a systematic sample with a random start was selected from the available cases. To achieve greater precision in the sample results, the cases were sorted by various demographic and service variables (including race/ethnicity, marital status, age, and duration of TANF receipt) before actual sampling from each stratum to achieve “implicit” stratification of the sample.

Other panel studies of welfare reform have not been able to make comparisons between urban and non-urban areas within a single state. This sampling strategy ensures sufficient sample sizes within smaller counties, enabling comparisons between a large metropolitan area and smaller regions with different labor market characteristics and different community supports providing important information about differential impacts of welfare reform.

Additionally, since it is not uncommon for recipients to lose their cash welfare benefits for one month only to have their benefits reinstated in the following month, selecting sample members from a single month would have resulted in a slight under-representation of families that temporarily have their benefits suspended. Because we are interested in how a loss or reduction in benefits affects families, it is important to correct for this potential bias. For this reason, we used a “rolling” sample: 625 sample members were randomly selected from three consecutive months of the state’s welfare caseload. This strategy overcomes any bias in representation stemming from “administrative churning” of the welfare caseload.

### Response Rates and Attrition Analysis

Of the original 1,899 sample members selected for the IFS in 1998, 1,363 were interviewed for the 1999-00 survey, for a response rate of 72% (see Exhibit 2-1). This initial response rate is consistent with and, in many cases, greater than the response rates of other large-scale surveys of welfare-involved or welfare-eligible individuals. Studies that have achieved higher response rates tend to be conducted within regions that are less urban than Cook County, and within only one region as opposed to several sites.

In 2001, 1,183 of the 1999-00 respondents completed a second survey interview (see Exhibit 2-1), for a response rate of 87%. In 2002, 1,072 respondents completed a third interview. Throughout this report, when data from all three waves are presented or analyzed, the analyses include the 1,072 respondents who completed interviews in all three waves.

#### *Exhibit 2-1. IFS survey response rates*

	Number of completed interviews	Response rate
1999-00 survey	1,363	72%
2001 survey	1,183	87%
2002 survey	1,072	91%

Overall, 56% of the original 1,899 sample members were interviewed at the three time points (1999-00, 2001, and 2002). To adjust for attrition between survey waves, the same method that was used to adjust for nonresponse in 1999-00 and 2001 was applied to adjust for nonresponse in 2002 (using administrative data from the original sampling frame, as well as a wide range of survey data from 2001). These nonresponse adjustment weights, in conjunction with the base weights that correct for the stratification design, are applied to the final 2002 sample.

One advantage of the IFS is the ability to construct nonresponse weights using sampling frame data on several key factors, including employment, welfare use, food stamp receipt, Medicaid enrollment, and a range of demographic factors. In constructing non-response weights, an algorithm was applied which produced a set of mutually exclusive groups that together accounted for the greatest amount of variation in response probabilities. This strategy minimizes the effects of bias in the sample related to differences in respondents and nonrespondents.

### Sample Characteristics

The IFS sample (n = 1363) included 38 men and one participant with missing data on the gender variable, but our analyses include only the 1311 women in the IFS sample. Of those, 13 women had missing data on almost every variable and thus were deleted from the dataset, bringing the total number of usable Wave 1 cases to 1311.

As shown in Exhibit 2-2, women who completed the Wave 1 interview ranged in age from 18 to 58, with an average age of 31. Almost 80% were African American, and about 12 percent (11.7%) were Hispanic. Remaining women were either European American (7.6%) or classified as belonging to none (1.8%) of the prior three categories. Over 60% (65.1%) had never been married, and most of those who had been married were either were separated or divorced (27.5%). Educational attainment was low, with 41.2% of the sample reporting less than a high school education. Respondents had an average of 3 children and were 19 years of age at the birth of their first child. Over 40% (43%) of the sample's family of origin had been welfare recipients. Many women (41.1%) had received welfare continuously in the year prior to Wave 1, and just over a third of the sample (34.8%) was working full time at Wave 1.

### *Exhibit 2-2. Demographic characteristics of the sample (n = 1311 unless otherwise noted)*

Characteristic	N	%
Family received public assistance until age 16 (n = 1226)		
None of the time	659	53.8%
Some of the time	347	28.3%
Most of the time	220	16.8%
Age		
18-19	20	1.5%
20-29	579	44.2%
30-39	490	37.4%
40-49	201	15.3%
50-59	21	1.6%
Race/Ethnicity		
African-American	1034	78.8%
Hispanic	154	11.7%
White	99	7.6%
Other	24	1.8%
Marital Status (n = 1304)		
Never Married	848	65.1%
Married/Live Together	80	6.1%
Married/Separated	214	16.4%
Divorced	145	11.1%
Widowed	16	1.2%
Motherhood		
Number of children (n = 1309)		
0	5	.04%
1	233	17.8%
2	354	27.0%
3	261	19.9%

Characteristic	N	%
4	209	15.9%
5	125	9.5%
6 or more	122	9.3%
Age at birth of first child (n = 1264)		
14 or younger	41	3.3%
15-17	423	33.5%
18-20	489	38.2%
21-25	232	18.3%
26 or older	85	6.7%
Education		
Have high school diploma	656	50.0%
Have General Equivalence Diploma (GED)	115	8.8%
Welfare Status		
Continuous (received welfare continuously in past year)	537	41.1%
Discontinuous (but currently receiving)	159	12.1%
Not currently receiving	614	64.9%
Work Status (n = 1307)		
Working part time (10 – 29 hours per week)	203	15.5%
Working full time (30 or more hours per week)	457	34.8%
Not working but looking for work	416	31.8%
Not working and not looking for work	230	17.6%

### Data Weighting

Weights were developed to adjust for differences between the composition of the sample and the composition of the universe. The primary weights include base weights, non-response adjustment weights, and panel weights. The base weight is the reciprocal of the selection probability specific to the sampling stratum. The base weights were adjusted to compensate for the effects of non-response. We developed these non-response adjustment weights within cells defined by known characteristics of respondents and non-respondents from the database. We also developed panel weights for the follow-up interviews. These weights were necessary to compensate for the differences in non-response rates across the panels. Weights to adjust for attrition from the study in Wave 2 and subsequent waves were also developed.

### Data Sources

All questions in the interview were drawn from previously validated and reliability-tested questionnaires, including the New Hope Study (Bos, Brock, Duncan, Granger, Huston, Kersick, & McLoyd, 1999), the Women's Employment Study (Danziger et al., 2000), and the Children, Families, and Welfare Reform Multi-City Study (Winston, Angel, Burton, Chase-Lansdale, Cherlin, & Moffitt et al., 1999). Questions about intimate partner violence are from the Conflict-Tactics Scale, adapted and used by other studies of welfare recipients, and from a validated scale of work and school harassment (Riger, Ahrens, & Blickenstaff, 2000). Many of these measures have been used in other welfare reform impact studies, affording comparisons with other regions and study sites. The survey instrument was pre-tested on 15 subjects with the opportunity for pilot respondents to comment on their understanding of the questions.

### Informed Consent Process

A letter from the project staff was initially used to recruit respondents during the first year of this longitudinal study. A toll-free number for contacting the project was established to address any initial questions and concerns. Subsequent recruitment was conducted by telephone and if unsuccessful, in-person. At all points of contact, sample members were informed that their decision to participate was voluntary. Subjects were asked to sign an informed consent form at the time of the Wave 1 interview. This form outlines the purpose of the study, the risks and benefits to participants, and the measures that will be taken to protect confidentiality of participants. The Human Subjects Review Boards at Northwestern University and the University of Illinois at Chicago approved all forms. Additional consent was obtained at the end of the Wave 1 interview, after rapport had been established between

the interviewer and respondent. This second consent form provides the respondent's consent for accessing unemployment insurance data. This consent form was approved by the Human Subjects Review Board at Northwestern University in September, 1999. IRB approval was also obtained from University of Illinois at Chicago.

### **Interview Process**

Nearly all interviews were conducted in person, usually in the respondent's home, unless respondents preferred an alternate location (e.g., a local restaurant or their work place). (Note that we take particular care that the interview process did not put respondents at risk of abuse; see below). The interview lasted approximately 70 minutes, and the respondent received a \$30 money order after completion of the interview. For the small number of interviews conducted by telephone (e.g., with respondents who have moved out of state), care was taken to schedule the interview for a time convenient (and safe) for the respondent.

The first of the annual surveys was administered between November 1999 and September 2000, the second between February 2001 and September 2001, and the third between February 2002 and September 2002. The average length of time between the 2001 and 2002 surveys was approximately 12 months, with a range from 7 to 18 months. These differing intervals between interviews should be kept in mind when interpreting the "changes" between survey waves. Such differences mean shorter or longer "risk" or "exposure" periods. In other words, respondents may have longer (or shorter) time periods for certain events to occur (e.g., getting a job, losing a job, getting married, giving birth, etc.) compared with other respondents. In the first survey (1999-00), questions were asked about the current month or the "previous 12 months," while in the second and third surveys (2001 and 2002), the same questions were asked about the current month or the time period "since the last interview." Although the "reference" time periods are not consistent across surveys, most respondents were interviewed reasonably close to one year after their initial survey, and three-quarters received their second interview within 8 to 16 months after their first interview.

### **Measures**

#### **Economic Status**

Several measures of economic status were used in the analyses presented in this report:

- whether participants were currently working;
- whether they were currently on welfare;
- work/welfare status at each wave: Participants were asked at each wave whether they were currently working or currently receiving welfare. From those two variables we created a work/welfare status variable with four values (no work, no welfare; welfare, no work; work and welfare; work, no welfare);
- wage per hour for those currently or recently employed: We asked those who were currently or recently employed how much they made per hour;
- annual income: The data used to create the income variable was taken from state records at Wave 1 and from survey responses at Wave 3; and
- employment stability, which was operationalized as the number/percentage of months worked in the past year, since the last interview, or since the study began. We asked respondents how many months they had worked in the past year (Interview 1) and since the last interview (Interviews 2 and 3) to create a "number of months worked" variable. Then we calculated the number of months that had elapsed between each interview for each woman and created a "percent of time employed" variable, which was the number of months women reported working divided by the number of elapsed months for the appropriate time period.

## Abuse

### Measures of Abuse

As a goal of our study was to determine how different types of abuse were associated with economic outcomes, we measured abuse in several ways. First, we assessed exposure to violence and violent victimization as a child.

- Exposure to severe punishment was assessed by the question “When you were growing up, was there an adult in your household who severely physically punished or abused any of the children in the household?”
- Childhood neglect was assessed by the question “As a child, do you feel like you were seriously neglected by a parent or caregiver?”
- Exposure to domestic violence as a child was assessed by the question “When you were growing up, was there an adult in your house who ever did any of the following to anyone in the house: kick, hit, slap, beat up, throw or knock down, choke, burn, or hit with an object?”
- Childhood physical abuse was assessed by the question “How many times do you remember an adult doing any of these things to you while you were growing up?” Responses were coded ‘never’ = 0, ‘once or twice’ = 1, ‘a few times’ = 2, and ‘many times’ = 3. This item was then dichotomized such that any response greater than zero was recoded as ‘1.’

Next, we assessed rates of physical, sexual and psychological intimate partner violence experienced by women before and during the study. We assessed whether participants had ever experienced intimate partner violence at Interview 1 as a baseline measure of victimization, and recent experiences with intimate partner violence across interviews to determine recent victimization experiences.

We measured intimate partner violence at Wave 1 in several ways. We used dichotomous measures to assess the presence of abuse and continuous measures to assess the amount of abuse.

- To assess the presence of physical, sexual and psychological abuse at Wave 1 and 2, we used a 21-item index of items from the MMS (Allard et al., 1997) and the WEB (Smith, Earp, & DeVillis, 1995). See Exhibit 3-1 for a list of items. We asked participants whether they had ever experienced or experienced in the past year psychological abuse such as threats or harassment at work or school, physical abuse such as being hit, slapped or kicked. We also asked whether women’s partners had forced them into unwanted sexual activity. Women answered yes or no to each item. We summed answers to create a continuous “amount of abuse” variable and created a dichotomous “presence of abuse” variable where women who answered yes to any item were classified as “abused” and women who did not were classified as “nonabused.”
- To assess the presence of severe physical and sexual abuse at Wave 1, we used the 6-item physical abuse index from the MMS. Women were asked the following questions about their partner’s abusive behavior: “In the past year, has any current or former spouse or partner...hit, slapped or kicked you; thrown or shoved you onto the floor, against a wall, or down stairs; hurt you badly enough that you went to a doctor or clinic; made you think that he might be going to hurt you; used a gun, knife, or other object in a way that made you afraid; forced you to have sex or engage in sexual activity against your will?” If women answered yes to one or more of the six items, they were assigned a 1 on the abusive partner variable.
- Eight items were common to all three waves; those items were used to measure intimate partner violence when data from all three waves were used and are referred to in this report as the “common items.” We assessed the presence of past and recent psychological, physical, and sexual abuse by an intimate partner using the 8-item items taken from the Massachusetts Mother’s Survey (Allard et al., 1997). Participants were asked if an intimate partner had “hit, slapped or kicked you, tried to stop you from seeing your friends or family, used a gun or knife in a way that made you afraid, told you that you were worthless or called you names, made you feel like you were programmed to react, physically hurt you in front of your children, forced you to have sex, or made you feel unsafe in your own home.” Answering

‘yes’ to any one or more of these items resulted in ‘lifetime history of DV’ being coded 1, answering ‘no’ to all of these items resulted in ‘lifetime history of DV’ being coded 0. We assessed sexual assault history by asking participants whether “a stranger, friend, acquaintance, date, or relative ever tried or succeeded in doing something sexual to you or make you do something sexual to them against your wishes?” Affirmative answers were coded 1, negative answers were coded 0.

- We determined patterns of violence across waves for Chapter 3 as follows:
  - Never: women who report never experiencing domestic violence
  - Past only: women who report experiencing abuse only at a time preceding the data collection period;
  - Intermittent: women who report experiencing abuse at least once over the three waves but not at all 3 waves;
  - Recent/Persistent: women who report experiencing abuse at Wave 3, and women who report abuse at all 3 waves.
- For theory-testing purposes, we categorized patterns of intimate partner violence differently in Chapter 7:
  - No Abuse (no abuse prior to or during the study);
  - Past Only (abuse before but not during the study);
  - Recent Only (abuse during but not prior to the study);
  - Intermittent (abuse prior to and in one year of the study);
  - Chronic (abuse prior to and in more than one year of the study).
- We also measured the prevalence of work/school abuse using the 12-item Work/School Abuse Scale (WSAS; Riger, Ahrens, & Blickenstaff, 2000). Items are shown in Exhibit 5-1. We asked women whether an intimate partner had ever: come to work, school or job training to harass you, bothered your co-workers, school friends, teachers or job-training friends, lied to your co-workers, school friends, teachers or job-training friends about you, sabotaged the car so you couldn’t go to work, school or job training, not shown up for child care so you couldn’t go to work, school or job training, stolen your keys or money so you couldn’t go to work, school or job training, refused to give you a ride to work, school or job training, physically restrained you from going to work, school or job training, threatened you to prevent your going to work, school or job training, physically forced you to leave work, school or job training, lied about your children’s health or safety to make you leave work, school or job training, and threatened to make you leave work, school or job training.

#### **Administrative Protocol for Intimate Partner Violence Items**

In response to a concern that women would be more likely to disclose abuse if they completed questionnaires rather than responding verbally to an interviewer, we varied the way the abuse items were administered across waves. (See Appendix A for an analysis of the effects of administration mode on prevalence rates.) At Wave 1, interviewers orally posed the questions. Interviewers then wrote down the participant’s answers. At Wave 2, participants were randomly assigned to one of two administration modes: the traditional interview mode used at Wave 1 or a self-report mode. After completing the interview, women assigned to the self-report group privately completed written questionnaires about their experiences of intimate partner violence. Women in the interview group responded orally to interviewer questions about abuse as they had at Wave 1. At Wave 3, all women completed written questionnaires.

#### **Change in screening protocol and measure of IPV at Wave 3**

Concerned about the low prevalence of abuse in our sample when compared with other welfare samples, we changed the screening protocol and the abuse measures at Wave 3 in the hope that we would more accurately capture rates of intimate partner violence in our sample. We asked about lifetime abuse at Waves 1 and 3. At Wave 2, we asked about abuse that had occurred between Waves 1 and 2. Reporting of work/school abuse was especially low at Waves 1 and 2, which prompted a change in screening protocol for the Work/School Abuse Scale. At Waves 1 and 2, we assessed whether



participants had experienced any work- or school-related abuse with two screening questions. Only women who endorsed a screening item were asked the work/school abuse items. At Wave 3, we eliminated the screening questions and administered the Work/School Abuse scale to all participants.

We also changed the way we measured intimate partner violence at Wave 3. For Waves 1 and 2, we used a 21-item index of abuse using items from the Massachusetts Mothers Study (MMS; Allard, Albelda, Colten, & Cosenza, 1997) and the Women's Experience with Battering (WEB; Smith, Earp, & DeVellis, 1995) scales. At Wave 3, we used 8 items from Waves 1 and 2 and added items from the Women's Employment Study, a similar study of women on welfare in Michigan (WES; Danziger, Corcoran, Danziger, & Heflin, 2000). Items used at all waves appear in Exhibit 2-3. (See Appendix A for a further analysis of differences among measures and the ability of each measure to predict employment stability.) Exhibit 2-3 lists each item used, its source, and the waves in which it was used.

*Exhibit 2-3. Items used to measure intimate partner violence at each wave*

Item	Source	Used at W1?	Used at W2?	Used at W3?
hit, slapped or kicked you*	MMS	Yes	Yes	Yes
Thrown or shoved you onto the floor, against a wall or down stairs	MMS	Yes	Yes	No
Hurt you badly enough that you went to a doctor or clinic	MMS	Yes	Yes	No
Made you think he might be going to hurt you	MMS	Yes	Yes	No
Destroyed or taken your possessions or things of value to you	MMS	Yes	Yes	No
Tried to keep you from seeing or talking with your friends or family*	MMS	Yes	Yes	Yes
Used a gun, knife or other object in a way that made you afraid*	MMS	Yes	Yes	Yes
Consistently told you that you were worthless or called you names in order to make you feel bad about yourself*	MMS	Yes	Yes	No
Threatened to hurt any of your children	MMS	Yes	Yes	No
Actually hurt any of your children	MMS	Yes	Yes	No
Threatened to take you children or do things that might cause your children to be taken away by DCFS	MMS	Yes	Yes	No
Actually taken or had DCFS take any of your children away from you	MMS	Yes	Yes	No
Yelled or screamed at you in front of your children	MMS	Yes	Yes	No
Physically hurt you in front of your children*	MMS	Yes	Yes	Yes
Ever had to call police or take other legal action, such as file an order of protection or swear out a peace bond, because a spouse or partner hurt you or threatened to hurt you	MMS	Yes	Yes	No
Forced you to have sex or engage in sexual activity against your will*	MMS	Yes	Yes	Yes
Tried to control your every move	MMS	Yes	Yes	No
Stranger, friend acquaintance, date or relative ever tried or succeeded in doing something sexual to you or made you do something sexual to them against your wishes; how old were you the first time this happened; about how many times has this happened altogether in your life	IFS	Yes	No	No
Made you feel unsafe, even in your own home	WEB	Yes	Yes	Yes
Made you feel like you couldn't "rock the boat" because you were afraid or what he might do	WEB	Yes	Yes	No
Made you feel like you were programmed to react in a certain way to him*	WEB	Yes	Yes	Yes
Made you feel unsafe in your own home*	WEB	No	No	Yes
Made you feel like you were scared of him, even when he had not laid a hand on you	WEB	No	No	Yes
Pushed, grabbed or shoved you	WES	No	No	Yes
Hit you with a fist	WES	No	No	Yes
Hit you with an object that could hurt you	WES	No	No	Yes
Beat you	WES	No	No	Yes
Choked you	WES	No	No	yes
Harassed you at home, for example, by making unwanted phone calls, showing up when not wanted, or leaving unwanted items for you to find	WES	Yes	Yes	Yes
Harassed you at work, school, or job training or interfered with your attempt to go to work, school or job training	WES	Yes	Yes	No

\* = one of the eight common items

## Sociodemographic factors

We asked women about several sociodemographic aspects of their lives:

- Women were asked whether they considered themselves to be African-American, White, or another race and whether they were of Latina, Chicana, or Hispanic origin. Those responses were recoded into a dichotomous minority status variable; women who self-identified as Non-Hispanic White were assigned 0; others were assigned 1.
- We asked women whether their families had received public assistance none, some or most of the time before they turned 16 to measure socioeconomic status of the family of origin.
- Respondents were also asked their age, and those who responded that they were over 40 were coded as having an age obstacle.
- Counties are designated by the state as urban or rural based on population. Women residing in the rural counties of Fulton, Knox, Marshall, Woodford, Tazewell, and Stark were assigned a one on the rural residency obstacle. Geocodes for each respondent's address at Wave 1 were included in the dataset obtained by UIC; we did not have access to respondent names and addresses.
- Women were asked if they were currently living with a partner, boyfriend, or girlfriend. Participants who were not living with a partner were coded as having a cohabitation obstacle. Cohabitation status rather than marital status was used because it may be a better predictor of income. Women were also asked to report the ages of each of their children.
- Women whose children were younger than six years of age, and would therefore require care during the day, were assigned a one for the young children obstacle. Number of children was measured continuously as the number of children participants reported having.

## Human capital factors

We used several measures of human capital factors in our analyses:

- Women were asked whether they had a high school education or general equivalency diploma. Those who did not received a 1 on an education obstacle variable.
- Highest level of education completed was measured continuously as number of years of formal schooling.
- Under the Illinois welfare reform act, participation in certain job training, education or counseling activities exempts women from work requirements for the duration of their participation. These "work substitution" activities include job training provided by the state, vocational education, and substance abuse or domestic violence counseling. Women who had not participated in any of these activities in the past year were assigned a 1 on a work substitution activities variable. Women who either already had a job or had recently engaged in job training, education or counseling programs received a zero on that variable.
- To determine whether participants had a potential literacy obstacle, they were asked whether they had trouble reading English. Women who answered that they had some or a lot of trouble were assigned a one on this variable.
- Prior work history was measured continuously as the number of years in which respondents had worked for pay since age 18.
- Job skills were assessed using Holzer's (1996) 9-item index of job skills for low-income workers, we asked women whether they had performed the following tasks in paid jobs that they had held for at least one month: talk with customers face-to-face or over the phone; read instructions or reports; write letters or memos; fill out forms, work with computers or other electronic machines such as cash registers, bar code scanners, or calculators; perform arithmetic or make change; or closely watch gauges, dials, or instruments of any kind. Answers to these items were summed to create an index of baseline job skills.
- To assess participation in recent job skills training, we summed the number of different types of job training activities our participants might have engaged in (i.e., job readiness programs,

job skills training, volunteer work experiences, formal education, etc.) to create a continuous measure of efforts to increase levels of human capital.

### Physical and psychological health factors

We assessed the prevalence of physical and psychological health problems in several ways:

- To ascertain physical health problems, we asked respondents whether they had a chronic health or medical problem that prevented them from working or affected their ability to work. If women endorsed that item, we then asked them whether they had a number of specific physical and mental health problems such as diabetes, high blood pressure, headaches, stress, back problems, a learning disability, or an emotional or mental health problem. We summed answers to these items to create a “number of health problems” variable.
- Women rated their overall health on a 5-point scale where 1 was poor and 5 was excellent, and answered yes or not to items asking whether they had received treatment or thought they needed treatment for a mental health problem.
- Perceived need for mental health treatment was measured by a single item that asked participants if they ‘ever felt that [you] needed treatment for a mental health problem’ in the past 12 months. Responses were coded ‘yes’ = 1, ‘no’ = 0.
- To examine the extent of depression among participants, we used an abbreviated 12-item version of Radloff’s (1977) 20-item Center for Epidemiological Studies Depression Scale (CES-D) developed by Ross, Mirowsky, and Huber (1983). This shortened version of the CES-D demonstrated high reliability with a Cronbach’s alpha of .94 and corrected item-total correlations of .56 to .81 at Wave 1. Respondents were asked whether they had experienced thoughts or behaviors indicative of depression less than one day, 1-2 days, 3-4 days or 5-7 days during the past week. Responses on the original 1-4 scale were recoded to a 0-3 scale, and answers were summed to create a continuous measure of depression with a range of 0 to 36. A cut-off score of 10, identified by Ross et al. (1983) as appropriate for determining whether respondents are clinically depressed, was used to categorize respondents. Those scoring 10 or above were coded as depressed. Women who said that in the past year they consumed more than five drinks at least three times or used drugs at least twice were categorized as having a frequent alcohol and drug use obstacle.

### Social Support and Support from the Welfare Office

Social support questions were adapted from the Three City Study (Winston et al., 1999). We assessed extent of social support by asking respondents whether they had enough people, too few people, or no one they could count on to listen to problems, help with small favors, loan them money, and encourage them in meeting their goals. Answers on each item ranged from 1 (no one) to 3 (enough people).

Women who said they could count on too few people or no one for support on any of the four items were coded as having negative social support, and answers were summed to create a continuous social support index. Women were also asked whether the welfare office had helped them gain employment through job leads or helped them with transportation or childcare. Women who did not receive this help were coded as having a lack of welfare office assistance.

### Mothering

We asked women in Interview 1 the age at which they first gave birth and the number of children they had. In subsequent interviews, we asked whether respondents were currently pregnant and how many children they had given birth to since the last interview. We used a 9-item index adapted from the Women’s Employment Study (WES; Kalil & Danziger, 2000) to measure childcare concerns at all interviews. We summed yes/no responses to items that assessed whether women were concerned about the quality, dependability, convenience, and cost of child care as well as whether they had problems securing adequate childcare during emergencies.

### Financial Hardship, Continuous Welfare Receipt, and Transportation Problems

We used a 14-item scale (Cronbach’s alpha = .76) from the Women’s Employment Study (Danziger, Corcoran, Danziger, & Heflin, 2000) to ascertain hardships women were facing. Women were asked if, in the past year, they had trouble paying rent, were evicted for nonpayment of rent, had utilities or

telephone service cut off for nonpayment, went without a phone, had to borrow money to help pay bills, went to a church or charity for clothes or financial help, received help from a government crisis assistance program, had to move in with family or friends or have someone move in with them to reduce expenses, couldn't afford to visit a doctor, pay for prescriptions, or visit a dentist when needed. If women answered yes to at least one of these items, they were coded as having a financial hardship. Women who were on TANF continuously from November of 1998 through September of 1999, the year prior to the start of Wave 1, were coded as having continuously received TANF. To assess transportation problems, women were asked whether they had a driver's license or access to public transportation. If not, they were assigned as having a transportation problem.

### County Unemployment Rate

The monthly unemployment rate for all Illinois counties was available through the Illinois Department of Employment Security (2000) and geocoded Wave 1 data were available, so this variable was calculated for each participant as the average unemployment rate from November 1999 to September 2000 in the county in which they resided at Wave 1. States with unemployment rates of 6.5% or above may be eligible for contingency funding from the federal government to cover welfare roll increases during economic downturns (Holzer, 2001). Although these rates were not that high due to the strong economy in 1999 and 2000, rates did vary from a low of 2.80% to a high of 6.77%. Three of the nine counties, Fulton, Stark and St. Clair, had unemployment rates above 5.5%. The next highest rate was a full percentage point below at 4.6%. Therefore, due to the natural break occurring between rates above 5.5% and rates below 4.6%, if a woman lived in a county where the average unemployment rate was higher than 5.5%, she was coded as living in an area with a high unemployment rate.

# Chapter 3: Prevalence and Univariate Analyses of Key Variables

## Introduction

This study focuses on examining obstacles to economic self-sufficiency – finding out what hinders women in their attempts to attain financial independence – with a special focus on the role of intimate partner violence. In this chapter, we review research on obstacles to employment among low-income women and present descriptive and univariate findings from our study. First, we review research on how each type of obstacle is associated with economic self-sufficiency. Then we provide a snapshot of the economic status and obstacles to employment faced by women at Wave 1. Next, we examine the prevalence of selected obstacles across time and explore how abuse is related to economic status and to other employment obstacles over the three-year period of the study. Obstacles examined include: abuse, sociodemographic factors, physical and mental health, social support/support from the welfare office, mothering, financial hardships/continuous receipt of TANF/transportation problems, and the unemployment rate.

## Abuse

Intimate partner violence and its association with employment outcomes has been the focus of much research. Raphael (2001) and Riger, Ahrens and Blickenstaff (2000) found that men who abused women physically were also likely to interfere with the women's attempts to work outside the home. Other studies suggest that a partner's abusive behavior does not affect whether a woman is employed but decreases the number of hours per week and months per year she works (Browne et al., 1999). One national longitudinal study found that living below the poverty level increased the chances that women would be abused, and that recent abusive behavior by a partner increased women's risk for unemployment (Byrne et al., 1999). Yet two studies found that being a survivor of either past or recent intimate partner violence did not affect employment (Lloyd & Taluc, 1999; Tolman & Rosen, 2001). Researchers have yet to fully explore whether there are differences in employment outcomes based on whether the abusive behavior was psychological, physical, sexual or some combination of the three. But one study (Smith, 2001) of poor women in Washington state did find that, in a sample of over 1400 low-income women in the state of Washington, those who survived a combination of recent physical and sexual intimate partner violence exhibited more job instability than did survivors of either recent physical or recent sexual violence. In the same study it was reported that women who were abused both physically and sexually as adults made almost \$4,000 less per year than nonabused women, whereas women who were physically but not sexually abused as adults made \$2,000 less than nonabused women. Honeycutt, Marshall and Weston (2001) found that being sexually assaulted predicted lower rates of employment for European and Mexican Americans but not for African Americans. Several researchers pointed out that intimate partner violence might help create additional psychological obstacles, as it is associated with high rates of PTSD, depression and anxiety (e.g., Allard, 1997; Browne et al., 1999; Raphael, 1996; Tolman & Rosen, 2001).

## Sociodemographic Factors

Loprest and Zedlewski (1999) found that older adults aged 51-65 were more likely to remain on welfare compared to their younger counterparts. Lloyd and Taluc (1999) found that age was associated with employment, and Danziger, Corcoran, et al. (2000) found that age in combination with poor physical health affected employment. Older women may have a harder time getting off welfare, either because they have received it longer and are more accustomed to relying on it or because they have less job skills, such as computer literacy, than younger recipients. Employers may discriminate against

them because of their age, they may need special help from the welfare office to increase their job skills or be less motivated to enter the workplace after a lifetime of welfare receipt. Minorities are overrepresented in the welfare population (Holzer, 2000). Studies of welfare-to-work transitions have shown that members of ethnic minorities are less likely to maintain steady employment than their white counterparts (Harris, 1996; Pavetti, 1993). Some studies suggest that minorities are also overrepresented among long-term welfare recipients. Loprest and Zedlewski (1999) reported that significantly more Hispanics remained on welfare rolls compared to their white counterparts. Indeed, even in 2003, there are many racial disparities in the workplace as a result of America's history of racism. Perceptions of workplace racism act as a psychological obstacle that negatively influences the motivation of some minority welfare recipients to seek employment (Telleen & Andes, 2002).

Economists have shown that the effects of a depressed economy differ for rural and urban areas, and that there are differences in levels of community support in rural and urban communities (Findeis, Henry, Hirschl, Lewis, Ortega-Sanchez, Peine, et al., 2001; Pindus, 2002). Several studies have shown that living in a rural area is associated with negative employment outcomes, and that welfare reform policy (macrosystem factor) may have less of an impact on rural recipients when compared to urban recipients (Cashwell & McNeece, 2000; Connolly, 2000; Danziger, Corcoran, et al, 2000; Findeis et al., 2001). There is some evidence to suggest that being married is associated with being employed. Results from two nationally representative samples of poor women suggest that never married or newly divorced women are at a higher risk for unemployment than are married women (Byrne et al., 1999; Loprest & Zedlewski, 1999). Some studies also show that being married or cohabitating decreases the risk of welfare receipt (e.g., Tolman et al., 2002).

### **Human Capital**

Low levels of human capital are crucial obstacles to economic self-sufficiency. Three obstacles, lack of a high school or general equivalency diploma, lack of participation in work preparation programs, and having trouble reading English were included. Education has emerged as one of the strongest predictors of employment outcomes among welfare recipients. Harris (1996) found that having a high school diploma increased the chances that a woman would leave welfare by 75%. Similarly, Loprest and Zedlewski (1999) compared former and current welfare recipients and found that 29% of former recipients had a high school education versus 41% of current recipients, while a three-city study found that welfare recipients without high school degrees made on average \$400 less a month than those with a high school education (Hamilton, Brock, Farrell, Friedlander, & Harknett, 1997). Another important predictor is whether women have engaged or are engaged in activities designed to increase their levels of human capital. Welfare reform law stipulates that several activities, while they are not formal employment, count as such when determining women's eligibility for TANF. These activities, which include participating in job search or training programs, completing high school, or undergoing counseling for domestic violence or substance abuse, are associated with positive employment outcomes (Browne et al., 1999). Lastly, literacy issues have been identified as obstacles to economic self-sufficiency among welfare recipients. Brooks and Buckner (1996) found that lower literacy was associated with decreased probabilities of employment among 400 low-income women, and Zaslow et al.'s results (2001) suggest that having trouble reading English is a major obstacle to employment among African American mothers on welfare. In a qualitative study, Telleen and Andes (2002) found that welfare caseworkers cited illiteracy as a major obstacle to employment among women attempting to transition from welfare to work.

### **Health**

Several studies found that poor physical health decreased the chances of employment among low-income women (Danziger, Corcoran, et al., 2000; Lloyd & Taluc, 1999; Tolman et al., 2002). Depression has been cited as a direct and indirect obstacle to economic self-sufficiency. Danziger, Corcoran, et al. (2000) and Kalil, Schweingruber and Seefeldt (2001) found that depression was directly associated with negative employment outcomes in a sample of over 700 female welfare recipients in Michigan. In a study of low-income African American and Latina women in Chicago, Lehrer, Crittenden and Norr (2002) found that short-term depression did not negatively impact employment outcomes but repeated episodes and chronic depression did. Some studies, however,

found no relationship between depression and employment (e.g., Kneipp, 2000; Zaslou et al., 2001) while results of other studies suggest that depression indirectly influences employment outcomes through its impacts on general psychological well-being (Julnes, Fan & Hayashi, 2001).

Preliminary evidence suggests that, as for members of the general population, substance abuse or dependence may be an obstacle to work for low-income women. A study of 512 multiethnic participants in California welfare-to-work program estimated that alcohol or drug dependence was severe enough to be a potential work obstacle for 10% to 21% of their sample, and drug dependency was found to be a significant obstacle to employment among a sample of over 200 TANF recipients (Montoya, Bell, Atkinson, Nagy, & Whitsett, 2002; Speigman, Fujiwara, Norris, & Green, 1999).

### **Social Support and Support from the Welfare Office**

Lack of adequate social support or the presence of negative social support is associated with low employment among low-income women. Some studies show that social support indirectly affects employment outcomes through its impact on a woman's psychological well-being (e.g., Kalil, Born, Kunz, & Caudill, 2001; Parker, 1994; Taylor, 2001). Telleen and Andes (2002), in their qualitative study of the social ecology of obstacles, identified the transmission of negative attitudes about working from family and friends to welfare-dependent women who are required by TANF to seek employment. Parker (1994) found that social support in the workplace itself was the single greatest predictor of whether women ended their dependence on welfare. Studies have also found that women need help obtaining job leads and adequate childcare, and if they are not receiving such help, the chances of their attaining economic self-sufficiency through work decrease (Blau & Tekin, 2001; Scrivner, Hamilton, Farrell, Freedman, Friedlander, Mitchell, et al., 2001).

### **Mothering**

Studies have also demonstrated that having children too young to attend school is an obstacle to employment. Some researchers have found that mothers of very young children prefer to stay home to take care of the children (Scott, Edin, London, & Mazelis, 2001; Telleen & Andes, 2001). Results of other studies suggest that women do not work because they are unable to afford quality childcare on a salary that is close to minimum wage (Brooks & Buckner, 1996; Joesch, 1991). Regardless of the reason, several studies have found that the presence of young children in the household is associated with poor employment outcomes (Danziger, Corcoran, et al., 2000; Honeycutt et al., 2001; Joesch, 1991; Lloyd & Taluc, 1999).

### **Financial Hardship, Continuous Welfare Receipt, and Transportation Problems**

The amount of financial hardship women experience has been linked to economic status: homeless women have poorer work outcomes and are more dependent on welfare than are poor housed women (Salomon, Bassuk, & Brooks, 1996). The length of time that a woman receives welfare is also associated with employment outcomes. Danziger, Corcoran, et al. (2000) showed that there was an inverse linear relationship between number of years of welfare receipt and employment: as number of years on welfare increases, chances of being employed decrease. Continuous receipt of TANF is an indicator that women are not successfully transitioning from welfare to work, as they were continuously welfare-dependent for 12 months. These women have been tagged "hard to serve" by researchers because being extremely welfare dependent has been associated with spells of homelessness, poor job skills, and poor mental and physical health (Danziger & Seefeldt, 2002; Loprest & Zedlewski, 2002). These women may have more obstacles than women who cycle on and off public assistance and therefore may require special services from the government to become economically self-sufficient.

Some researchers have speculated that lack of access to transportation could be an obstacle to employment in that if women do not have reliable transportation they will not be able to attend work reliably. Both private and public transportation have been investigated. Two studies found that not having access to a car or not having a driver's license significantly decreased rates of employment among low-income women (Danziger, Corcoran, et al., 2000; Tolman et al., 2002). Lack of private transportation may not be an obstacle to employment in the case of women on welfare. Among poor women who lack the financial resources to purchase, maintain and insure an automobile, access to



private transportation is a function of interactions between these women and car-owning individuals in the neighborhood. Public transportation, which is rare in rural areas and a characteristic of the neighborhood in urban areas, is associated with employment outcomes (Cashwell & McNeece, 2000). Lack of access to private or public transportation is a critical obstacle to employment; women can only apply for jobs accessible through public transit or are forced to rely on other individuals for their transportation to and from work (Zedlewski, 1999).

### Unemployment Rate

Much debate in the welfare reform literature has centered on how much of the decrease in welfare caseloads is due to policy and how much is due to the strength of the economy. Holzer (2002) contends that the work requirements of welfare reform are based on the assumption of a strong economy. When economic conditions worsen, the unemployment rate goes up. It is difficult for those with high levels of human capital to find employment during recessions, and it may be even more difficult for former welfare recipients. Smith (2001) found that the unemployment rate was negatively associated with wage per hour in a sample of 1383 Washington state poor women, perhaps because in a depressed economy workers are willing to accept lower wages. Bell (2001) found that welfare caseloads rose 5% for every percentage point increase in the unemployment rate. Economists are also concerned that the effects of a recession on the labor market last far beyond the actual recession period. Holzer (2002) points out that during the recession of the early 1990's, the unemployment rate peaked in 1992 but welfare caseloads continued to increase until 1994.

## What Was the Prevalence of Childhood, Lifetime and Recent Abuse at Wave 1?

➤ **Significant minorities of women were exposed to domestic violence, abused as children, or abused by intimate partners, and much of the intimate partner violence women experienced was physical.** About 20% of the sample witnessed domestic violence as a child or were victims of child abuse. Almost a third of the sample had been with abusive partners at some time in the past, and almost a tenth experienced recent abuse by a partner. Hitting, slapping and kicking was the most frequently reported type of abuse and was experienced by 40% of those who reported recent victimization.

### Childhood Victimization

As children, 85 women (8%) reported that they were exposed to severe punishment, 8% felt that they had been severely neglected by a parent or caregiver, 20% were exposed to domestic violence, and 23% were physically abused as a child.

### Lifetime and Recent Intimate Partner Violence at Wave 1

At Wave 1, we asked women to report their lifetime experiences with intimate partner violence as well as their experiences in the past year. As shown in Exhibit 3-1, about a third (29.2%) of the sample had been victimized by intimate partner violence, with almost a tenth (9.3%) experiencing abuse within the year. The prevalence of abuse by act was similar for lifetime and recent abuse with a few exceptions. Women in the Wave 1 IFS sample experienced past and recent psychological, physical and sexual forms of abuse by intimate partners. The most frequently reported psychologically abusive acts were making women think they were about to get hurt, trying to control them, telling them they were worthless or calling them names, and yelling at them in front of their children.

Hitting, slapping and kicking were also reported frequently. In fact, it was the most frequent type of abuse women reported ever experiencing in their lifetimes (21.4%), and was experienced by over 40% of recently abused women. Being thrown or shoved was more prevalent among recently abused women, with 29.5% in that group experiencing it compared to 12% of the entire sample, as was sexual abuse, which was reported by 4.7% of the entire sample and 7.4% of recently abused women. Significant minorities of women experienced past and recent intimate partner violence that manifested in psychological and physical ways. Patterns of lifetime and recent abuse were similar, with hitting, slapping and kicking the most prevalent type of physical abuse. Lifetime psychological abuse most

often took the form of abusers trying to control women's every move, whereas with recently abused women it was most often expressed as yelling and screaming in the presence of children.

*Exhibit 3-1. Prevalence of intimate partner violence as measured by the 21-item index at Wave 1 (N = 1311)*

Abusive Acts	Lifetime		Past year		% of recently abused women
	<u>n</u>	<u>% of sample</u>	<u>n</u>	<u>% of sample</u>	
Any act	383	29.2%	122	9.3%	100%
Type of act					
Hit, slapped or kicked her	281	21.4%	50	3.8%	41.0%
Threw or shoved her	159	12.1%	36	2.7%	29.5%
Hurt her bad enough to go to a clinic	121	9.2%	20	1.5%	16.4%
Thought he was trying to hurt her	212	16.2%	47	3.6%	38.5%
Destroyed or took her possessions	163	12.4%	26	2.0%	21.3%
Tried to stop her from seeing friends or family	133	10.1%	26	2.0%	21.3%
Used a gun or knife in a way that made her afraid	86	6.6%	12	0.9%	9.8%
Told her she was worthless or called her names	188	14.3%	51	3.9%	41.8%
Felt like she couldn't rock the boat	142	10.8%	29	2.2%	23.8%
Felt like she was programmed to react	137	10.5%	30	2.3%	24.6%
Tried to control her every move	220	16.8%	60	4.6%	49.2%
Threatened to hurt her children	46	3.5%	1	0.0%	0.8%
Actually hurt her children	23	1.8%	3	0.2%	2.5%
Threatened to take her children	45	3.4%	3	0.2%	2.5%
Actually had DCFS take her children	21	1.6%	4	0.3%	3.3%
Yelled or screamed at her in front of her children	204	15.6%	61	4.6%	50.0%
Physically hurt her in front of her children	106	8.1%	18	1.4%	14.8%
Force her to have sex	61	4.7%	9	0.7%	7.4%
Felt unsafe even in her own home	138	10.5%	32	2.4%	26.2%
Harassed her at home	136	10.4%	37	2.8%	30.3%
Harassed her at work or school	60	4.6%	13	1.0%	10.7%
Number of acts					
1	66	5.0%	37	2.8%	30.3%
2-4	102	7.8%	37	2.8%	30.3%
5-7	57	4.3%	25	1.9%	20.5%
8-10	50	3.8%	12	0.9%	9.8%
11-13	48	3.7%	8	0.6%	6.6%
14-16	40	3.1%	6	0.5%	4.9%
17 or more	22	1.7%	0	0.0%	0.0%

### What Was the Economic Status of the IFS Sample at Wave 1?

- **In 1999 when the study began, women worked sporadically for very low wages and relied heavily on public assistance.** The average woman worked less than 6 months per year, made \$7.14 per hour, and earned about \$5,000 per year. Over 30% earned no income at all in the year prior to the Wave 1 interview. Over 85% received welfare in the past year, and over half were receiving it at the time of the Wave 1 interview.

As shown in Exhibit 3-2, almost all women had worked at some time in their lives. The average age of women in our sample was 31 at Wave 1, when employment history data were collected. Although these women have had on average 13 years in the adult labor force, over 60% (66.1%) worked in less

than half of those years. But many women, when they worked, worked full-time for at least one year. Only 19% of the sample reported working full time in none or less than one of the years prior to Wave 1.

Although half the sample was employed at Wave 1, in the year prior to that interview, women worked sporadically for very low wages, and most (86%) still relied on TANF at sometime during the year. About a third were either working only or on welfare only at the time of the Wave 1 interview, whereas fewer women combined work and welfare or received income from neither source. With a median hourly wage of only \$7.00 per hour, and almost 75% (72.2%) earning between \$5.00 and \$8.00 per hour, these women appear to be employed for the most part in low-wage, entry-level jobs. Although over half the sample reported working at Wave 1, a significant minority (35.5%) earned no income in the year prior to Wave 1. Over 60% of the women made less than \$5,000. Less than a third of the sample worked all 12 months in the past year, and on average, women worked about 6 out of 12 months, or a little over half the year.

*Exhibit 3-2. Economic status at Wave 1*

Measures of Economic Self-Sufficiency	n	%
Employment History		
Ever worked for pay (n = 1311)	1234	94.1%
Years worked for pay since age 18 (n = 1231)		
Less than 1 year	111	9.0%
1-3 years	384	31.2%
4-6 years	319	25.9%
7-10 years	176	14.3%
More than 10 years	240	19.5%
Years worked full time (n = 1230)		
0	42	3.4%
Less than 1 year	192	15.6%
1-3 years	44	36.1%
4-6 years	252	20.5%
7-10 years	147	12.0%
More than 10 years	154	12.5%
Currently Employment and Welfare Status		
Currently working (n = 1307)	660	50.5%
Currently receiving cash TANF (n = 1311)	697	53.1%
Off TANF continuously in the past year (n = 1311)	184	14.0%
Work/Welfare Status (n = 1307)		
Work only (Worked for pay and did not receive any welfare)	381	29.2%
Welfare only (Received welfare and did not work at all for pay)	416	31.8%
Work and welfare (Worked for pay and received welfare)	279	21.4%
Neither (Neither worked for pay nor received welfare)	231	17.6%
Number of jobs for those currently working (n = 658)		
1	644	97.7%
2	12	1.8%
3	2	0.3%
Hourly wage (n = 644)		
Median = \$7.00, Mean = \$7.41, SD = \$5.70		
\$0 – \$4.99	46	7.1%
\$5.00 – \$6.99	254	39.5%
\$7.00 - \$8.99	210	32.7%
More than \$9.00	134	20.8%
Yearly Income (n = 1309)		
Median = \$1418.68, Mean = \$5068.82, SD = \$6874.13		
0	465	35.5%
\$1-\$4,999	367	28.0%
\$5,000-\$9,999	216	16.5%
\$10,000-\$14,999	123	9.4%
Over \$15,000	139	10.6%
Percentage of months worked in the past year (n = 1217)		
Median # months worked = 6.00		
Mean # months worked = 5.95, SD = 4.80		
Did not work	311	25.6%
Worked less than 25% of the time	98	8.1%
Worked less than 50% of the time	164	13.5%
Worked less than 75% of the time	204	16.7%
Worked less than 100% of the time	114	9.4%

Measures of Economic Self-Sufficiency	n	%
Worked 100% of the time	326	26.8%

### What Obstacles to Employment did Women Face at Wave 1?

- **When the study began, women faced multiple obstacles to employment.**  
The average woman had 5 obstacles to employment, and a majority of women (84%) faced at least four obstacles.

As shown in Exhibit 3-3, almost three-quarters of the sample (74.4%) faced between 4 and 7 obstacles to employment. Most of the sample were of minority ethnicity (92.6%) and not currently cohabitating with their partners (95%). Other frequently reported obstacles include having less than a high school education (41.1%), facing severe financial hardships (such as having to rely on charity organizations for food or clothing; 67.7%), continuous receipt of TANF in the past year (41.1%) and not receiving job assistance or childcare help from the welfare office (49.8%).

#### *Exhibit 3-3. Prevalence of obstacles among IFS women at Wave 1 (N = 1309)*

	n	%
Total number of obstacles per participant		
2-3	199	15.2%
4-5	575	43.9%
6-7	399	30.5%
8-9	111	8.5%
10-11	25	1.9%
Prevalence of individual obstacles		
Abuse		
Partner abusive in past year (as measured by the MMS 6-item physical abuse index)	115	8.8%
Sociodemographic		
Member of an ethnic minority	1212	92.6%
Age 40 or older	219	16.7%
Lives in a rural county	17	1.3%
Is not cohabitating with a partner	1244	95.0%
Has children all under age 6	331	25.3%
Human Capital		
Less than high school education	538	41.1%
No recent work substitution activities	309	23.6%
Trouble reading English	90	6.9%
Health		
Poor physical health	60	4.6%
Depression	113	8.6%
Frequent substance use	60	4.6%
Social Support and Support from the Welfare Office		
Low levels of social support	301	23.0%
No welfare office assistance	652	49.8%
Financial Hardship, Continuous Welfare Receipt and Transportation Problems		
Severe financial hardships	860	65.7%
On TANF continuously past year	535	41.1%
Transportation problems	17	1.3%
Unemployment Rate		
High unemployment rate	52	4.0%

## Was the Number of Employment Obstacles Associated with Economic Status at Wave 1?

- **As the number of obstacles to employment increases, income and employment stability decrease.** Women who had over five obstacles to employment made less money and worked fewer hours than women with less than five obstacles.

There were differences in income and employment stability as a function of total number of obstacles, as shown in Exhibit 3-4. Post-hoc tests were not conducted with those who had 10-11 obstacles due to the low n size of that group (n = 24). The relationship between total number of obstacles and both measures of economic self-sufficiency was negative and linear: income and number of months worked decreased as the number of obstacles increased. There was a difference of over \$6,000 per year in income and over 3 months of employment between the women who had the least and most obstacles. In general, women with less than five obstacles made significantly more money and worked significantly more months of the year than did women with over five obstacles, but there were no differences in employment outcomes between those who had 2-3 obstacles and those who had 4-5 obstacles. Nor were employment outcomes different for those who had 6-7 obstacles and those who had 8-9 obstacles.

Women with 10-11 obstacles made only \$1,962.92 in the year prior to Wave 1, whereas women with 2-3 obstacles made on average \$7,974.37. Post-hoc testing revealed that women with 6-9 obstacles made less money from employment annually (\$2960.79) than women with 2-5 obstacles (\$7056.56). The number of obstacles also influenced the number of months women worked in the year prior to Wave 1. Women who had the most obstacles worked the least. Women who had 10-11 obstacles worked only 4.46 months, but women who had 2-3 obstacles worked 7.65 months. Women who had 6-9 obstacles worked significantly fewer months (5.14) than did women with 2-5 obstacles (7.30 months).

### *Exhibit 3-4. Mean differences in income and number of months worked as a function of number of obstacles*

Group Number	# obstacles per participant	Group n	Mean Yearly Income (n = 1279)	Mean # months worked per year for women who earned income from working (n = 795)
1	2 -3	196	\$7974.37 <sup>(3,4)</sup>	7.65 <sup>(3,4)</sup>
2	4-5	561	\$6138.74 <sup>(3,4)</sup>	6.94 <sup>(3,4)</sup>
3	6-7	389	\$3409.30 <sup>(1,2)</sup>	5.72 <sup>(1,2)</sup>
4	8-9	109	\$2512.27 <sup>(1,2)</sup>	4.56 <sup>(1,2)</sup>
5	10-11	24	\$1969.92	4.46
Test statistic			F (4,1274) = 23.69*	F (4,790) = 7.58*

Note: Group 5 was not included in post-hoc testing due to a low n size. <sup>1-4</sup> superscript numbers denote differences from the indicated superscript group obtained by the Games-Howell post-hoc testing procedure for groups with unequal sample sizes and variances. \*p < .05.

## How Does Economic Status Change over a Three-year Period?

- **Over the three years of the study, fewer women relied on public assistance for income and more women relied on work, but employment patterns remained sporadic.** At the end of the third year of the study, most women (81%) were not receiving public assistance, and the number of women receiving income from work had increased 30%. However, the average woman was employed less than half the time over the three year-period of the study.

As can be seen in Exhibit 3-5, nearly 45% of the participants had left the welfare roles by the time of the Wave 1 interviews (those in the Work Only and Neither categories). By the time of the Wave 3 interviews, 81% were no longer receiving public assistance (those in the Work Only and Neither categories). The number of women who received income from work increased across the three waves. At Wave 3, approximately 30% more women were receiving income from work than at Wave 1 (those in the Work Only, and Work and Welfare categories). However, the number of women employed at the time of the interviews remained relatively stable across the three waves of data collection, as did the percent of time worked. The percentage of women working more than 50% of the time remained relatively constant at about half the sample (W1 = 52.9%, W2 = 45.5%, W3 = 51.1%) Across all waves, the average number of months participants worked was 18.6, and the average participant was employed 45% of the time.

*Exhibit 3-5. Work/Welfare status for each year of the study*

Classification	Wave 1 (n = 1311)	Wave 2 (n = 1088)	Wave 3 (n = 962)
Currently working	50.5%	52.9%	48.4%
Currently receiving cash TANF	53.1%	30.8%	19.5%
Work/Welfare Status			
Work only (Worked for pay and did not receive any welfare)	29.2%	42.4%	59.8%
Welfare only (Received welfare and did not work at all for pay)	31.8%	20.8%	9.6%
Work and welfare (Worked for pay and received welfare)	21.4%	10.7%	9.9%
Neither (Neither worked for pay nor received welfare)	17.6%	26.1%	20.7%
Percentage of available months worked			
Did not work	25.6%	35.3%	31.0%
Worked less than 25% of the time	8.1%	9.0%	7.9%
Worked less than 50% of the time	13.5%	10.1%	10.0%
Worked less than 75% of the time	16.7%	13.4%	15.7%
Worked less than 100% of the time	9.4%	15.7%	23.9%
Worked 100% of the time	26.8%	16.4%	11.5%
Percentage of available months worked across all waves = 45%			
Number of months worked across all waves = 18.6			

## How Do Employment Obstacles Change Over a Three-Year Period?

- **Women did not generally face fewer obstacles to employment over the course of the study although some obstacles became less prominent than others.** The prevalence of recent intimate partner violence fluctuated, but women had less childcare concerns and reported more social support. Mental health problems remained constant across waves.

As shown in Exhibit 3-6, recent (in the past 12 months or since the most recent interview) intimate partner violence fluctuated from 5.3% to 10.3% across the three waves of data collection. From Wave



1 to Wave 3 of the study, women in our sample participated in fewer job training activities, had fewer childcare concerns, experienced slightly increased social support, and relatively stable levels of depression and perceived need for mental health treatment. Due in part to the relatively large sample size, analysis of variance revealed significant mean differences over time for all repeated measures.

*Exhibit 3-6. Prevalence of obstacles to employment at each wave*

Variables	Wave 1 Mean (S.D.)	Wave 2 Mean (S.D.)	Wave 3 Mean (S.D.)	Mean Comparison*
Recent intimate partner violence (as measured by the 8 common items)	5.3% (.23)	10.3% (.30)	8.8% (.28)	$F(3, 952) = 61.32$
Recent job training	46% (.50)	28% (.45)	15% (.36)	$F(3, 967) = 365.16$
Childcare concerns	34% (.47)	20% (.40)	10% (.29)	$F(3, 923) = 3748.64$
Births and/or pregnancies since last interview		22% (.41)	13% (.33)	$F(2, 968) = 3833.68$
Recent social support	10.14 (2.15)	10.31 (2.20)	10.50 (2.15)	$F(3, 960) = 11886.70$
Recent depression	6.17 (8.44)	5.20 (7.39)	6.48 (6.75)	$F(3, 967) = 1950.37$
Perceived need for mental health treatment	6% (.24)	6% (.23)	5% (.21)	$F(3, 961) = 44.80$

*Note.* Analysis includes only the 962 women who completed all three waves and had no missing data on variables.

\*For all mean comparisons,  $p < .001$ .

### How Do Abuse Patterns Over Time Affect Employment Obstacles and Economic Status?

Research on the relationship between domestic violence and employment has yielded mixed results. Some studies (Lloyd & Taluc, 1999; Smith, 1999; Tolman & Rosen, 2001) have found little or no significant relationship while others have found that violence affects job stability over time (Browne et al., 1999; Riger, Staggs, & Schewe, in press). One explanation for the mixed findings may be that different patterns of violence may affect women differently. That is, persistent violence may have a different impact than sporadic violence or a single episode of violence. For instance, Tolman, Danziger, & Rosen (2002) using two waves of data found that women who had endured recent or persistent violence had significantly lower monthly earnings compared to women who had either never experienced abuse, or whose episodes of abuse were not recent. Here we examine the relationship between patterns of violence over time (especially recent and persistent experiences) and employment.

Another possible explanation for the mixed findings is that violence may be related differently to various aspects of economic well-being (Browne et al, 1999). For instance, it may affect how often the abused woman has to miss work thus threatening job stability as she may be either fired or have to quit and so hold many jobs in a short period of time; she may have to work fewer hours or only for part of the year and hence take home less income; or she may be limited to performing less skilled and more lower paying jobs and so earn a low hourly wage. We consider these four aspects of employment in the current exploration.

Other factors may also affect employment. Certain human capital factors, namely education and job skill level, are likely to affect the women's ability to get and maintain a job (Danziger, Corcoran, et al. 2000; Danziger, Kalil, & Anderson, 2000). We therefore include these factors in the current analyses. In addition, previous research has found that health (both mental and physical) of women recently exposed to abuse is worse than that of other women (e.g., Browne et al., 1999; Lloyd, 1997; Tolman & Rosen, 2001) and thus may also affect a woman's ability to work. We include indicators of both forms of health along with measures of social support and childcare concerns. Three demographic variables that may impact a woman's ability to get and maintain a job (age, number of children, and age at birth of first child) are also included. The first two variables have been shown to affect employment; as women on welfare get older, age has more of an effect on their ability to get employment (e.g., Danziger, Corcoran, et al. 2000; Lloyd and Taluc, 1999), and the more children a woman has can

directly and indirectly affect her employment stability (Honeycutt, Marshall, & Weston, 2001). The variable age at birth of first child incorporates elements of both of these factors so it is also included. To explore how patterns of domestic violence abuse relate to the above-mentioned variables, we use analyses of variance (ANOVA) or chi-square analyses where appropriate to examine the relationship between patterns of abuse over time and employment obstacles.

### Patterns of Abuse and Employment Obstacles

➤ **Abuse is associated with poorer health, less social support, and more childcare concerns.** Women who are recent or persistent victims of abuse reported more concerns about childcare, higher levels of depression, and less social support than women abused in the past only or women who have never been abused.

Classification of domestic violence experiences result in approximately 65% of the women in the never category ( $n=615$ ), 16% in the past only category ( $n=149$ ), 10% in the intermittent category ( $n=97$ ), and 9% in the recent/persistent category ( $n=82$ ). A clear pattern emerges when comparing women who have never been abused to those who were abused at some time during the three waves of data collection. Women who have never been abused have significantly fewer childcare concerns,  $F(3,918) = 7.06, p < .05$ , higher levels of social support,  $F(3,938) = 17.95, p < .05$ , and experience a lower level of depression,  $F(3,938) = 18.45, p < .05$ , than women who are either in the intermittent or the recent/persistent categories. In addition women who had been abused only in the past have significantly higher levels of social support than both women in the intermittent or the recent/persistent categories, fewer childcare concerns, and a lower level of depression than women who are recently or persistently abused. The chi-square analysis for physical health problems is not significant,  $\chi^2(3,688) = 4.53, ns$ .

There are also significant differences associated with the age variables but these differences do not suggest a pattern. Women who were never abused are significantly older than women in the intermittent category,  $F(3,938) = 4.37, p < .05$ . Also, women in the recent/persistent category had their first child at a much older age than women abused in the past only and women in the intermittent category,  $F(3,907) = 5.74, p < .05$ , and women who had never been abused have their first child at an older age than women abused in the past only. The descriptive statistics for each group are shown in Exhibit 3-7.

#### *Exhibit 3-7. Sociodemographic indicators as a function of patterns of intimate partner violence*

Sociodemographic Indicators	Patterns of intimate partner violence							
	Never		Past Only		Intermittent		Recent	
	M	sd	M	sd	M	sd	M	sd
Age	31.17 <sup>1</sup> ( $n=615$ )	8.46	33.12 ( $n=149$ )	7.50	29.53 <sup>1</sup> ( $n=97$ )	7.49	32.19 ( $n=82$ )	7.32
Age at birth of first child	19.63 <sup>1</sup> ( $n=600$ )	3.64	18.72 <sup>1,2</sup> ( $n=143$ )	3.39	19.10 <sup>3</sup> ( $n=86$ )	3.40	20.74 <sup>2,3</sup> ( $n=82$ )	4.83
Total Number of Children	3.53 ( $n=615$ )	1.93	3.86 ( $n=149$ )	1.96	3.78 ( $n=97$ )	2.67	3.76 ( $n=82$ )	2.58
Childcare Concerns at Wave 3	.18 <sup>1,2</sup> ( $n=599$ )	.75	.19 <sup>3</sup> ( $n=147$ )	.98	.47 <sup>1</sup> ( $n=95$ )	1.17	.64 <sup>2,3</sup> ( $n=81$ )	1.78

Level of Social Support	10.84 <sup>1,2</sup> (n=615)	1.87	10.70 <sup>3,4</sup> (n=149)	2.01	9.92 <sup>1,3</sup> (n=97)	2.54	9.27 <sup>2,4</sup> (n=82)	2.65
Level of Depression	15.48 <sup>1,2</sup> (n=615)	5.66	16.18 <sup>3</sup> (n=149)	7.00	18.58 <sup>1</sup> (n=97)	8.81	20.56 <sup>2,3</sup> (n=82)	8.95

Note: Numbers with the same superscript numbers (i.e., 1, 2) differ at  $p < .05$ .

Numbers vary because of missing data and because not all questions were relevant to all participants. For example, those not working at Wave 3 did not report a current hourly wage.

### Patterns of Abuse and Economic Status

➤ **Employment stability (number of months worked in a year) varies significantly as a function of abuse patterns over time.** Women who experience persistent, intermittent or recent abuse work fewer months each year than women who have never been abused or have been abused only in the past.

As shown Exhibit 3-8, women who are persistently abused or who are recent victims of abuse complete more years in school than women who experience abuse in the past only or those who experience abuse intermittently,  $F(3,930)=5.88, p < .05$ . The groups of women do not differ in terms of the job training respondents had,  $F(3,938)=2.09, ns$ .

Likewise, only one of the four employment variables relates significantly to abuse. Recent and persistent victims of abuse, and women who experience abuse intermittently, worked less in the period between their Wave 2 and 3 interviews than women who were abused before study,  $F(3,918)=3.96, p < .05$ . Although not significantly different, the annual income of recent and persistent victims of abuse was less than women who have never been abused or those abused before the time of the study. This perhaps is a reflection of the shorter period recent and persistently abused women spend in the work force in a year. These women also hold more jobs than all other categories of women.

*Exhibit 3-8. Employment indicators by patterns of intimate partner violence*

Employment Indicators	Patterns of intimate partner violence							
	Never		Past Only		Intermittent		Recent/ Persistent	
	M	sd	M	sd	M	sd	M	sd
Highest Grade	11.80 <sup>1</sup> (n=610)	1.64	11.30 <sup>1,2</sup> (n=148)	1.66	11.38 <sup>3</sup> (n=95)	1.90	12.08 <sup>2,3</sup> (n=81)	1.70
Job Training	1.25 (n=615)	1.44	1.19 (n=149)	1.71	1.64 (n=97)	1.82	1.38 (n=82)	1.58
Employment Stability at Wave 3 (percentage of months worked between Waves 2 and 3)	49.41 (n=615)	39.74	52.93 <sup>1,2</sup> (n=146)	39.26	39.34 <sup>1</sup> (n=97)	37.33	39.04 <sup>2</sup> (n=82)	38.11
Number of Jobs since 1998	3.03 (n=222)	1.20	3.00 (n=69)	1.21	3.27 (n=27)	1.33	3.62 (n=22)	1.47
Hourly Wage at Wave 3	8.88 (n=252)	2.69	8.46 (n=65)	2.60	7.80 (n=34)	1.77	8.25 (n=23)	2.33
Total Annual Income at Wave 3	\$14,725 (n=438)	\$9,020	\$14,811 (n=102)	\$7,609	\$13,634 (n=64)	\$10,040	\$14,013 (n=62)	7,725

Note: Numbers with the same superscript numbers (i.e., 1, 2) differ at  $p < .05$ .

Numbers vary because of missing data and because not all questions were relevant to all participants.

For example, those not working at Wave 3 did not report a current hourly wage.

# Chapter 4: Factors Associated with Lifetime History of Domestic Violence and Sexual Assault Victimization

## Introduction

Although many studies have been conducted that explore factors related to sexual assault (SA) and domestic violence (DV) victimization, it remains unclear whether DV and SA share a common set of antecedents and/or consequences. A better understanding of the antecedents and consequences of SA and DV may lead to improved efforts to prevent victimization and/or reduce the impact of victimization. The purpose of this chapter is to explore factors related to DV and SA victimization using a common set of antecedents and consequences in a single sample of low-income women.

A recent review of the literature highlighted the known risk factors for domestic violence victimization, as well as the debate in the field about the relationship between witnessing domestic violence as a child and future victimization. In this review, Riggs, Caulfield, and Street (2000) discuss correlates of marital violence victimization. Though they contend that research on the subject shows inconsistent results across studies, they point out that most studies support the idea that certain characteristics are associated with victimization. One of these characteristics is witnessing violence in the family of origin. Some studies disagree, either denying any significant relationship or asserting that the association between the two does not transmit to the specific role of victim but rather a vulnerability to interpersonal family aggression (Cappell & Heiner, 1990, as cited in Riggs et al., 2000). Other risk factors that have been found relevant to domestic violence victimization are the experience of childhood victimization, namely childhood physical and/or sexual abuse, violence in dating relationships, and substance abuse as an adult.

Since the 2000 domestic violence review, several studies have continued to examine the individual and family of origin risk factors related to lifetime domestic violence and sexual assault victimization. For example, in the Adverse Childhood Experiences study, Whitfield, Anda, Dube, and Felitti (2003) examined future risk of intimate partner violence (IPV) in women. The results illustrated that childhood physical abuse increased IPV victimization in women by more than 2-fold. Childhood sexual abuse increased these risks by 1.8-fold, while witnessing domestic violence in the family of origin increased the risks 2-fold. There was also a strong graded relationship between the number of adverse childhood experiences and the risk of becoming an IPV victim. Similarly, Ehrensaft, Cohen, Brown, Smailes, Chen, and Johnson (2003) conducted a 20-year prospective study to test an integrated developmental model of partner violence. The authors found that witnessing violence between parents, physical abuse as a child, and conduct disorder during adolescence were significant predictors of intimate partner violence victimization. Unfortunately, the type of victimization, whether sexual assault or domestic violence, was not specified (Ehrensaft et al., 2003).

Stermac, Reist, Addison, and Millar (2002) explored childhood experiences related to risk for later sexual assault victimization with 277 women attending outpatient clinics at a large Canadian hospital. In general, women with a history of forced sexual assault had lower educational achievement, greater probability of using government assistance, and were less likely to be currently involved in a relationship. Sexual risk factors associated with adult sexual assault victimization included childhood sexual abuse by adults and early sexual experiences with peers, which could be considered a result or manifestation of the sexual abuse. Familial predictors of adult sexual assault victimization included the

absence of a father figure during childhood, perceived low-level of closeness to father figure during adolescence, and experience of neglect by mother figure during adolescence.

Early abuse experiences and family of origin and other contextual variables may have an effect on the type of sexual assault or characteristics related to sexual assault. Zweig, Syer, Crockett, and Vicary (2002) investigated risk factors for sexual victimization with 237 young adult rural women over a period of 12 years. This research differentiated between forced and coerced sex, and both contextual and individual risk factors were taken into account regarding the probably of both types of victimization. The results revealed a significant relationship between forced sex and a mother's education whereby the odds of being in the forced sex group versus the never victimized group increased by 42% with a one-unit increase in mother's education. Frequency of sexual intercourse was the only variable shown to be a significant predictor of coerced sex; whereby the odds of being in the coerced sex group versus the never victimized group increased by 50% with a one-unit increase in sexual intercourse.

### The Current Research

Although these studies have explored risk factors related to domestic violence and sexual assault victimization, none has used the same measures and sample to examine differences between risk factors associated with sexual assault and those associated with domestic violence. Nor did these studies account for socioeconomic variables such as minority status, education and job skills, or number of children when predicting adult victimization. The current study uses parallel logistic regression equations to predict lifetime experience of sexual assault and domestic violence among a low-income sample of welfare recipients in Illinois, with data from Wave 1 of the Illinois Families Study.

### Analysis

Hierarchical logistic regression was used to assess whether childhood exposure to violence variables predicted a lifetime history of sexual assault and domestic violence victimization. Sociodemographic and health related variables were used as control variables in the analyses.

## What Factors Were Associated with a Lifetime History of Domestic Violence and Sexual Assault?

- **Lifetime experiences with domestic violence increase as the number of sociodemographic, abuse, human capital, and mothering obstacles increase.** Having more children, higher levels of depression, and exposure to childhood physical abuse and parental domestic violence was also related to experiencing more lifetime domestic violence.
- **Job skills, social support, perceived need for mental health treatment, and exposure to parental domestic violence were associated with lifetime experiences with sexual assault.** Women with more job skills were more likely to experience lifetime sexual abuse. Exposure to parental domestic violence, having less social support, and perceiving a greater need for mental health treatment also predicted lifetime experiences with sexual assault.

Hierarchical logistic regression was used to predict lifetime experience of both sexual assault and domestic violence victimization. Entering the sociodemographic and health related variables as one block and then entering childhood exposure to violence variables as a separate block yielded an overall Nagelkerke R-square of .28 and .32 for domestic violence and sexual assault respectively. This suggests that our model was able to account for nearly one-third of the variance in our sample. As can be seen in Exhibit 4-1, significant relationships were observed between domestic violence and minority status, education, job skills, number of children, depression, exposure to domestic violence, and the

experience of childhood physical abuse. Inspection of the means reveals that non-minority status, higher education, greater job skills, more children, greater depression, exposure to domestic violence, and being physically abused as a child were related to increased lifetime domestic violence victimization.

Analyses of sexual victimization revealed that job skills, social support, a perceived need for mental health treatment, and childhood exposure to domestic violence were associated with a lifetime history of sexual assault. Inspection of the means reveals that greater job skills, less social support, increased need for mental health treatment, and more childhood exposure to domestic violence were related to increased lifetime sexual assault victimization.



*Exhibit 4-1: Logistic Regression Analyses: Comparison of Factors Associated with Domestic Violence and Sexual Assault*

	Lifetime Domestic Violence Nagelkerke R-square = .25		Lifetime Sexual Assault Nagelkerke R-square = .32	
	Wald's $X^2$	Odds Ratio	Wald's $X^2$	Odds Ratio
Block 1: Sociodemographic Variables				
Minority status	7.96**	.51	.03	1.06
Highest Grade	4.07*	1.11	.45	1.05
Job skills	13.16***	1.13	10.63***	1.17
Number of Children	7.28**	1.13	1.96	.91
Social Support	1.90	.94	5.41*	.88
Frequent alcohol or drug use	2.39	1.73	.32	1.31
Chronic health or medical problems	1.42	1.27	1.38	1.35
Depression	4.42*	1.02	2.31	1.02
Perceived need for mental health treatment	.61	1.29	4.04*	2.16
Block 2: Childhood Exposure to Violence Variables				
Exposure to Severe Punishment	.54	.77	.43	1.30
Seriously Neglected by Parent	1.97	1.62	.002	.98
Exposure to Domestic Violence	8.58**	2.31	29.36***	8.12
Childhood Physical Abuse	25.80***	3.90	1.94	1.69

Note: \* =  $p < .05$ , \*\* =  $p < .01$ , \*\*\* =  $p < .001$ ; N=897

## Discussion

The rate of sexual assault reported by this sample is also somewhat lower than rates observed in other samples. This lower rate might be due in part to the use of a single, non-behavioral item to assess participants' history of sexual assault. Future studies should consider using multiple questions that assess specific sexual acts or behaviors rather than single questions that require survivors to conceptualize or label their experiences in a particular way (Koss, 1993).

The results of the logistic regressions reveal several interesting similarities and differences between factors related to domestic violence and sexual assault. The one overwhelming similarity is that childhood exposure to domestic violence is a significant risk factor for both sexual assault and domestic violence victimization. Being physically abused as a child was associated with lifetime domestic violence, but not lifetime sexual assault. This is particularly interesting because it is clear that much of the reported sexual assaults occurred when the participants were still children; 32% indicated that their first assault occurred before the age of 10, 49% indicated that their first assault occurred between the ages of 10 and 16. This suggests that childhood physical abuse and sexual abuse may be for the most part unrelated. It is quite possible that the dynamics of childhood physical abuse and the intent of the perpetrator(s) may be more dissimilar from those of childhood sexual abuse than similar, which may also have implications for lifetime victimization experiences. These are avenues for further inquiry.

For domestic violence victimization, the finding that increased education and job skills are risk factors supports the theory that domestic violence occurs when men perceive that their partner has more power in their relationship (Riger & Krieglstein, 2000). As women gain power through increased education and job skills, the men in their lives may attempt to regain power and control with abusive tactics. We explore this further in the next chapter. This finding is also consistent with the finding that increased employment among married Indian and Pakistani women living in the U.S. was associated with increased domestic violence (Adam & Schewe, under review). The positive relationship between number of children and domestic violence is also consistent with the existing idea that women with children may be less likely or able to leave an abusive partner for financial and other reasons. The finding that social support is associated with sexual assault, but not domestic violence is somewhat surprising. Social isolation (i.e., low social support) is more commonly associated with domestic violence than sexual assault. Here, social support was assessed currently, while domestic violence or sexual assault could have occurred anytime in the women's lives. Therefore social isolation could not be observed as a causal factor within this sample, but instead, may represent the effects of victimization. For this sample, it appears that victims of sexual assault perceived that they have less social support than victims of domestic violence. Along these same lines, the data also suggest that victims of domestic violence are more likely to be depressed than victims of sexual assault, and victims of sexual assault are more likely to perceive the need for mental health treatment than victims of domestic violence. Surprisingly, frequent alcohol and drug use were not associated with either type of victimization. Existing research suggests that drug and alcohol use can be both a risk factor and a consequence of victimization, as survivors self-medicate to manage the pain associated with relationship violence.

The results of this study suggest that childhood exposure to domestic violence and childhood physical abuse are significant risk factors for both domestic violence and sexual assault victimization. These findings remain even after controlling for sociodemographic variables, health related variables, and childhood exposure to severe punishment and neglect. Fortunately, more attention is being paid to child witnesses of domestic violence. Demonstration projects such as the Office of Juvenile Justice and Delinquency Prevention's Safe Start Initiative (<http://www.nceev.org/programs/safe-start/index.html>) are working to find ways to identify children exposed to domestic violence and provide them with services that might someday halt the inter-generational transmission of abuse. In addition, that over 80% of the women were first sexually assaulted in childhood points to a need for continued prevention and intervention strategies in families as well as continued research on how these early experiences may relate to future victimization. This study also suggests that as low-income women empower themselves through education and increased job skills, their risk for victimization may increase. Clearly, prevention and intervention programs are needed to teach men non-abusive ways to manage power and control differences in their relationships; as well as prevention programs that teach young people healthy relationship skills.

# Chapter 5: The Relationship of Change in Economic Status and Abuse

## Introduction

There are two main theories that explain the relationship between employment and interpartner violence, exchange theory and the backlash hypothesis. Exchange theory (Homans, 1974) suggests that the relative amount of resources (in the form of such things as social status and job security) each partner contributes to a relationship may determine the level of power each has within the relationship. According to Homans (1974) “principle of least interest”, the partner who has more resources is least dependent on the relationship. Using the approach that men use violence to control because they can get away with it, exchange theory is applicable to intimate partner violence. A nationally representative sample of American couples showed that husband-dominated marriages had the highest rate of abuse and egalitarian marriages had the lowest (Coleman & Straus, 1986; Straus, Gelles, & Steinmetz, 1980). Assuming job security is a major contributing resource to a relationship, we expect that women who obtain employment, and thus are able to make a financial contribution to the household, would be less likely to be abused because their partner is somewhat dependent on the income the woman contributes and he would not want to jeopardize that. On the other hand, the feminist backlash hypothesis suggests that within abusive relationships, an improvement in women’s economic status (by getting a job or earning additional income) would be seen as a threat to their partner’s power and would result in an increase in abuse (see Riger & Krieglstein, 2000, for a detailed discussion).

Abuse may take the form of general interpersonal violence, or it may be specifically aimed at interfering with women’s employment or education. Here we look at changes in women’s work/welfare status and whether those changes are associated with changes in levels of abuse. We use two measures of abuse: first, the Work/School Abuse Scale, which asks directly about interference with employment and education (see Riger, Ahrens, & Bickenstaff, 2000, for details of scale development), and second, the eight common items measuring abuse that are common to all three waves of the study.

Also considered in these analyses is the effect that going on or off welfare may have on the level of abuse women experience. Going on welfare can be seen as an improvement in economic status and can result in increased abuse for those already in abusive situations according to the backlash hypothesis, or a decrease in abuse according to the exchange theory. If women come off welfare, the opposite effect using each of the respective theories would result. Assuming the woman does not leave welfare for a job that provides more income, exchange theory suggests that because the woman is contributing less financially she has less power within the relationship and so abuse increases. For this situation, the backlash hypothesis suggests that the woman is less threatening to the man’s control in the relationship, and so abuse decreases. In this chapter, we consider each wave of data separately. The next chapter considers the effects of abuse across all three waves together.

## What Is the Prevalence of Work/School Abuse Over a Three-Year Period?

- **The Prevalence of work/school abuse significantly increased over three years.** At Wave 1, 0.6% of the sample reported experiencing work- or school-related abuse. At Wave 3, the prevalence had increased to 5.1%.

Here we present the frequency of work/school abuse. Exhibit 5-1 illustrates the overall prevalence of work/school abuse, as well as the prevalence of abuse by item on the Work/School Abuse Scale.

### *Exhibit 5-1. Prevalence of work/school abuse at each wave*

During the past 12 months (since last interview), has a current or former spouse, (boy/girl) friend or partner...	Wave 1		Wave 2		Wave 3	
	N	%	N	%	N	%
Come to work, school or job training to harass you?	2	0.2	16	1.2	16	1.2
Bothered your co-workers, school friends, teachers or job-training friends?	2	0.2	9	0.7	10	0.8
Lied to your co-workers, school friends, teachers, or job-training friends about you?	2	0.2	18	1.4	14	1.1
Sabotaged the car so you couldn't go to work, school, or job training?	1	< 0.1	7	0.5	10	0.7
Not shown up for childcare so you couldn't go to work, school, or job training?	0	0	9	0.7	22	1.7
Stolen your keys or money so you couldn't go to work, school, or job training?	3	0.2	19	1.4	20	1.5
Refused to give you a ride to work, school, or job training?	3	0.2	15	1.1	25	1.9
Physically restrained you from going to work, school, or job training?	2	0.2	15	1.1	12	0.9
Threatened you to prevent your going to work, school, or job training?	2	0.2	13	1.0	15	1.1
Physically forced you to leave work, school or job training?	0	0	11	0.8	6	0.5
Lied about your children's health or safety to make you leave work, school, or job training?	2	0.2	11	0.8	10	0.7
Threatened you to make you leave work, school, or job training?	0	0	10	0.7	13	1.0
Overall Prevalence of Work/School Abuse	8 <sup>a,c</sup>	0.6	37 <sup>a,b</sup>	2.8	67 <sup>b,c</sup>	5.1

Note: Values with the same superscript are significantly different from each other.

In order to detect changes in the prevalence of work/school abuse over time, chi-square analyses compare the overall prevalence of work/school abuse between pairs of waves. The occurrence of work/school abuse increases from Wave 1 (N=8) to Wave 2 (N = 37),  $\chi^2(1, 1312) = 65.376, p < .0001$ . Prevalence of work/school abuse also increases significantly from Wave 2 to Wave 3,  $\chi^2(1, 1311) = 47.587, p < .0001$ , and from Wave 1 to Wave 3,  $\chi^2(1, 1311) = 6.566, p < .01$ . In sum, the prevalence of work/school abuse increases from Wave 1 to Wave 2, and from Wave 2 to Wave 3.

However, the significant increases in work/school abuse from Wave 1 to Waves 2 and 3 could be due in part to changes in the way the data was collected between the two time periods. For Wave 1, respondents were asked if they experienced work/school abuse only if they revealed that their current or former partner harassed them any time in the past. In Waves 2 and 3, all respondents were asked the work/school abuse items, regardless of whether a current or former partner had ever harassed them. That is, no screening question was used in Waves 2 and 3. Thus, we must interpret with caution any

changes in abuse between Waves 1 and 2. Given the change in administration of these items between Wave 1 and 2, but not between Wave 2 and 3, we may place more weight on the latter findings. However, the low Ns in these tables make these results suggestive at best.

### Is Getting a Job Associated with a Change in Abuse?

- **Getting a job is associated with an increase in abuse.** Women who become employed across the waves have higher levels of abuse, although the amount of increase in abuse is not always statistically significant.

The first set of analyses examine whether gaining employment result in a change in the level of violence women experience. To this end, for the analyses we consider only women who had an increase in their employment/school status over each pair of waves of interviews.

We use repeated measures t-tests to compare changes in work/school abuse between two consecutive waves for these select women. There are significant changes from Wave 1 to Wave 2,  $t(172) = 1.99, p < .05$ , and from Wave 1 to Wave 3,  $t(145) = 3.45, p < .05$ . The change from Wave 2 to Wave 3 is not significant,  $t(103) = .61, ns$ . For all comparisons there is an increase in work/school abuse. These results lend support to the backlash hypothesis - as women enter the workforce or go back to school the amount of work/school abuse perpetrated against them increases.

We repeat these analyses using the common domestic violence items as the measure for abuse. Again there is a significant change from Wave 1 to Wave 2,  $t(173) = 3.28, p < .05$ . The changes from Wave 1 to Wave 3 and from Wave 2 to Wave 3 are not significant,  $t(149) = 1.40, ns$  and  $t(99) = -1.06, ns$ , respectively.

These results do not yield a consistent pattern between becoming employed and change in abuse. In general, there is an increase in abuse regardless of the measure used, but there is a smaller increase for abuse associated with the home setting (the common items). This finding may be a reflection of two things. Fewer opportunities may arise for abuse in the home because if women become employed they spend less time in the home, thus decreasing the time available for abuse to occur. Second, once women are working, incidents of abuse may be more work/school-related than home-related. Also, results involving Wave 1 must be interpreted with caution since (as discussed above) there was a difference across waves in how this information was collected.

### Is Stopping Work Associated with a Change in Abuse?

- **Stopping work is associated with a decrease in abuse.** Women who become unemployed have lower levels of abuse, although the amount of decrease in abuse is not always statistically significant.

In this set of analysis we only consider women who stopped working or attending school over each pair of waves. For this reason, we only examine whether this change in employment/school status is associated with the common items – the work/school abuse index is not relevant for these women. As shown in exhibit 5-2, the analysis for the common items is significant for the change from Wave 2 to Wave 3,  $t(135) = -2.23, p < .05$ . Both results for Wave 1 to Wave 2, and for Wave 1 to Wave 3 are not significant,  $t(149) = -.02$  and  $t(165) = -.40$ , respectively. For all pairs, there is a decrease in the level of abuse. These results are expected using the backlash hypothesis. Women who are no longer working may be more dependent on their partner and so are less threatening to their partners' control. Therefore, abuse decreases.

*Exhibit 5-2. Mean change scores and standard deviations for women whose employment status changed by waves and abuse measurement.*

	Wave 1 to Wave 2		Wave 2 to Wave 3		Wave 1 to Wave 3	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Became employed (Work/School Abuse)	.12* <sup>a</sup>	.80	.13	2.16	.39 <sup>a</sup>	1.38
Became employed (8 common items)	.40 <sup>a</sup>	1.63	-.16	1.52	.17	1.46
Stopped working (8 common items)	-.003	1.77	-.31 <sup>a</sup>	1.60	-.05	1.51

Note: \* negative mean indicates a *decrease* in abuse

<sup>a</sup>  $p < .05$

### Is Going on Welfare Associated with a Change in Abuse?

- **Going on welfare is associated with a change in abuse.** Women who go on welfare experience an increase in abuse, but the increase is (mostly) not statistically significant.

As in the prior analyses, we first measure level of abuse with the work/school abuse index and then with the common eight items. For these analyses, only women who went on welfare between each pair of waves are included. We use repeated measures t-tests to compare changes in work/school abuse between two consecutive waves for women who went on welfare between waves. For all comparisons there is an increase in level of abuse, but none of these changes is significant: from Wave 1 to Wave 2,  $t(81) = 1.70$ , *ns*, from Wave 1 to Wave 3,  $t(49) = 1.34$ , *ns*, or from Wave 2 to Wave 3,  $t(42) = .58$ , *ns*. The same analyses using the common items as the measure of abuse produce similar results. There is an increase in abuse for all pairs of waves, but only one change is significant. The change from Wave 1 to Wave 2,  $t(81) = 2.92$ ,  $p < .05$ , is significant but the other two changes are not, from Wave 1 to Wave 3,  $t(49) = .89$ , and from Wave 2 to Wave 3,  $t(42) = -.73$ .

### Is Going off Welfare Associated with a Change in Abuse?

- **Going off welfare is generally associated with a change in abuse.** Although abuse in work and school settings significantly increases when a woman goes off of welfare at any wave, the only significant increase in abuse in home settings (the common items) was between Wave 1 and Wave 2.

In this set of analysis we only consider women who went off welfare between each pair of waves. Level of abuse was measured first with the work/school abuse index and then with the common eight items. As shown in Exhibit 5-3, using the work/school abuse index as the measure for abuse revealed a significant increase in abuse between each pair of waves. The changes were from Wave 1 to Wave 2,  $t(309) = 2.23$ ,  $p < .05$ , from Wave 1 to Wave 3,  $t(376) = 3.96$ ,  $p < .05$ , or from Wave 2 to Wave 3,  $t(172) = 3.20$ ,  $p < .05$ . In contrast, using the common items as the measure for abuse produced mixed results. There was one significant increase in abuse from Wave 1 to Wave 2,  $t(314) = 2.43$ ,  $p < .05$ , but the other results were not significant, from Wave 1 to Wave 3,  $t(388) = 1.23$ , and from Wave 2 to Wave 3,  $t(171) = -2.33$ . In addition there was a small decrease in abuse between Wave 2 and Wave 3. These analyses do not differentiate between women who left welfare for work and those who left for other reasons. We will examine that issue in future analyses.

*Exhibit 5-3. Mean change scores and standard deviations for women whose welfare status changed by waves and abuse measurement*

	Wave 1 to Wave 2		Wave 2 to Wave 3		Wave 1 to Wave 3	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Went on welfare (Work/School Abuse)	.03*	.18	.06	.74	.11	.58
Went on welfare (8 common items)	.48 <sup>a</sup>	1.50	-.05	.41	.10	.83
Went off welfare (Work/School Abuse)	.11 <sup>a</sup>	.83	.14 <sup>a</sup>	.56	.14 <sup>a</sup>	.69
Went off welfare (8 common items)	.21 <sup>a</sup>	1.56	-.02	.93	.07	1.17

Note: \* negative mean indicates a *decrease* in abuse

<sup>a</sup> $p < .05$

### Is Experiencing Abuse Associated with a Change in Employment in the Future?

- **Experiencing abuse is not associated with a change in employment in the future when looking at each year separately.** These data present no support for the proposition that experiencing abuse is associated with less employment when data from each wave was examined separately.

The next set of analyses examine whether women who experience work/school abuse in one wave are less likely to be working at the next wave. The backlash hypothesis predicts that men abuse their partners in order to reestablish their dominance and power over their partners, especially when women are employed outside the home or going to school. The abuse makes it difficult for a woman to maintain employment or remain in school, and therefore causes her to stop working or attending school. Therefore, abuse decreases the likelihood of future employment.

We examine the effects of abuse on future employment (as measured by whether women are working at the time of their interviews) by using analysis of variance (ANOVA) with the work/school abuse score as the independent variable and change in employment as the dependent variable. For instance, we investigate if work/school abuse at Wave 1 is associated with a change in employment from Wave 1 to Wave 2. This one-way ANOVA is not significant,  $F(1, 1081) = .079, ns$ . We ran similar analyses comparing abuse at Wave 2 with changes in employment from Wave 2 to Wave 3, ( $F(1, 962) = .036, ns$ ), and comparing abuse at Wave 1 with changes in employment from Wave 1 to Wave 3 ( $F(1, 958) = .172, ns$ ) but neither is significant.

In order to capture all of the possible forms of abuse that a perpetrator might use to sabotage woman's ability to work, we also examine whether the eight common items are associated with changes in future employment. There are no statistically significant findings, though the comparison of level of abuse at Wave 1 with change in employment from Wave 1 to Wave 2, tends to significance,  $F(8, 1069) = 1.77, p < .08$ . The effect of abuse at Wave 2 on employment changes across Wave 2 and Wave 3, ( $F(8, 945) = .37, ns$ ), and the effect of abuse at Wave 1 on employment between Wave 1 and Wave 3, ( $F(8, 946) = 1.43, ns$ ) are both not significant. Here we have considered the relationship between abuse and employment in each wave separately. In the next chapter, we examine the relationship of abuse to employment over all three years of the study.

### Discussion

The results of the four main question we address in these analyses tend to support the backlash hypothesis explanation of how a woman's economic power within a relationship affects the abuse she experiences. Getting a job, and going on welfare, which both suggest the woman has a higher level of

independence, are associated with higher levels of abuse; stopping work, which might make the woman more dependent on the relationship, is associated with lower levels of abuse. However, going off welfare also is associated with higher levels of abuse, which is counter to what the backlash hypothesis suggests. The data also suggest that experiencing abuse at one point is not associated with a change in work status in the near future (a 12-month period). Perhaps because welfare recipients must work in order to keep their welfare benefits, women may continue to work despite abuse.

These analyses, however, have many shortcomings. The biggest problem is the change in the removal of the screening question after Wave 1, which resulted in a big increase in the number of women who report experiencing abuse in a work or school setting. Future research examining the relationship between work/welfare status and employment status should use consistent ways of assessing abuse level (as suggested by this data set, there should be no screening question).

The results also differed somewhat depending on whether the work/school abuse index or the common domestic violence items was used to measure level of abuse. These differences could also be the result of the varied administration of the work/school abuse questions, but it is more likely the differences indicate that these two methods of measuring abuse are capturing a bigger picture than either one does on its own. It may therefore be better if future research uses one index that includes multiple aspects of abuse, that is, abuse that is directly related to work or school settings, as well as abuse that is related more to the home setting.

The fact that in a few instances, change in work or welfare status at Wave 1 affects level of abuse experience at Wave 3 raises the question of how long these effects last. Collecting data from women in these situations for longer periods will help answer this question. Based on how questions were asked, we were not able to ascertain the specific timing between when women started or stopped working, or when they went on or came off welfare, and when they experienced changes in the abuse. We only know the abuse change occurred sometime during the 12-month period after women had a change in their work/welfare status. Including qualitative data about the timing of abuse may help to establish a clearer link between these various factors.

With all these limitations, the analyses do suggest a relationship between work and welfare status and a change in levels of abuse, which should be further investigated. If we are requiring women to work, we must be aware of the increased risk this poses for women in abusive relationships.



# Chapter 6: Intimate Partner Violence and Other Obstacles to Employment Stability Over Three Years

## Introduction

Several studies of women on welfare have examined the impact of violence on women's ability to become employed (summarized in Tolman & Raphael, 2001). In general, findings suggest that violence may not prevent women from getting jobs, but it may interfere with their ability to sustain employment over time (Tolman & Raphael, 2001). But findings of different studies seem to depend on whether the studies are cross-sectional or longitudinal; whether they consider a history of domestic violence as well as recent violence; whether they consider only severe or also moderate levels of violence; whether they control for possible confounding work-related variables; and whether they use small, non-representative samples or large samples that better reflect the welfare population (Tolman & Raphael, 2001; Votruba-Drzal, Lohman, & Chase-Lansdale, 2002). Moreover, studies of the effects of violence on work may not include other factors that affect employment, such as the multiple demands of the role of mother. Many women face serious challenges balancing the competing demands of nurturing and providing for their families, but lack of resources makes these challenges particularly difficult for mothers who receive public assistance.

The current study examines how violence, the demands of the mother role, and other work-related factors affect work stability, defined for the purposes of the study as the percentage of months women worked during a three-year period, among women on public assistance. This is one of the first studies to look simultaneously at a number of factors that may influence how mothers on public assistance sustain employment over a long period of time. We also consider past abuse and present abuse separately.

### **Intimate Partner Violence and Employment Among Women on Public Assistance**

The prevalence of domestic violence among women on public assistance is difficult to assess, in part because researchers use different definitions of abuse. Some define violence as physical abuse, while others may include psychological abuse or examine how abusers interfere with women's attempts to work or attend school (Riger, Ahrens, & Blickenstaff, 2000; Tolman, 1999). Several studies find high rates of abuse among poor women, especially among those receiving public assistance (Allard, Albelda, Colten, & Cosenza, 1997; Browne & Bassuk, 1997; Honeycutt et al., 1999; Lloyd & Taluc, 1999; Raphael, 1996). Rates of recent or current physical abuse among women on public assistance range from 10% to 77%, compared to a rate of 1.3% among women in the general population, while rates of lifetime abuse among women on public assistance are even higher, with rates ranging from 22% to 83%, compared to 22% among the general population (Tjaden & Thoennes, 1998; Tolman & Raphael, 2001).

Researchers have examined work interference both among women with abusive partners and women on public assistance. Findings from both populations document that abusive men attempt to interfere with women's employment. Among women in three urban battered women's shelters who worked or went to school despite being forbidden by their partners, 85 percent missed work because of abuse while 56 percent missed school and 52 percent were fired or quit because of abuse (Riger, Ahrens, Blickenstaff, & Camacho, 1998). Among women applying for public assistance in Colorado, 44% reported that their abusive ex-partners had barred them from working (Pearson et al., 1999). Abuse may also keep women dependent on public assistance. Among a representative statewide sample of Illinois welfare recipients, domestic violence increased welfare recidivism through its negative impact on psychological health (Julnes, Fan & Hayashi, 2001), and several studies show that abused women are more likely to be dependent on welfare than their nonabused peers (e.g., Rodriguez, Lasch, Chandra, & Lee, 2001; Romero, Chavkin, Wise, & Smith, 2003; Tolman, Danziger, & Rosen, 2002).

Abusive partners engage in a variety of tactics to interfere with women's employment. These tactics range from failing to fulfill child-care responsibilities and destroying textbooks before an exam to administering beatings with highly visible bruises (so that women cannot go to job interviews or to work) and harassing women and their co-workers on the job (Kenney & Brown, n.d.; Raphael, 1995). Abusers also may attempt to undermine women's self-confidence or make them feel guilty about leaving children in order to go to work (Tolman & Raphael, 2001). For example, Brush (2000) found that women whose partners equated working with poor mothering were five times more likely than peers to drop out of a job readiness program. Women whose partners allowed them to work only if they did not fall behind on housecleaning were three times more likely than others to drop out. Some cross-sectional studies of women have not found a significant association between current domestic violence and employment (Browne et al., 1999; Lloyd & Taluc, 1999; Tolman & Rosen, 2001). However, violence may affect economic self-sufficiency over time (Brown, Salomon, & Bassuk, 1999). Moreover, although abuse may not affect whether or not a woman is employed, it may affect other dimensions of employment, such as income or job stability. Among extremely poor women in Massachusetts, those who had experienced intimate partner violence in the past 12 months had been employed for fewer hours per week and for fewer months than women who had not experienced violence (Browne et al., 1999). In a three-city study of women on public assistance, although domestic violence was not associated with women's entry into the paid labor force, modest increases in rates of domestic violence were associated with movement out of the labor force (Votruba-Drzal et al., 2002; c.f. Barusch et al., 1999).

Stability of employment over time may be an important predictor of financial self-sufficiency for women leaving public assistance. Many prior studies of obstacles to employment among low-income women measure employment by asking respondents whether they are currently employed (Tolman & Raphael, 2001). However, women may cycle between public assistance and work, and current employment by itself may not be an indicator of employment stability. Measuring employment over time provides additional information on how obstacles impact women's ability to achieve stable employment, a critical factor in successfully transitioning permanently from public assistance to work.

### **Other Work-Related Factors**

Factors other than intimate partner violence may also affect women's employment. Aspects of the role of mother, such as availability, cost and subsidy of childcare and family responsibilities may also impede women's ability to work. Although poor women report that the limited supply of affordable childcare is the greatest obstacle to their employment, TANF childcare provisions vary widely by state (Brooks & Buckner, 1996). Lack of transportation to work, a large family size, and substance abuse problems have also been found to hinder a woman's ability to leave public assistance through work (Harris, 1993; Romero et al., 2002).

The model of human capital (Becker, 1964) suggests that workers can do things, such as get more education, to make themselves more productive and enhance their ability to obtain stable employment. Although few contest the continuing presence of race and gender discrimination (Seavey, 1996), it is undeniably true that those who have more education, job skills, and work experience are more likely to be employed. Poor women with greater investments in human capital are better able to exit public

assistance through work (Harris, 1993). Yet the current provisions of welfare reform discourage women from seeking higher education by allowing them to receive welfare only if they are either working or engaged in vocational training. This keeps women stuck in low-paying jobs with minimal opportunities for advancement.

In addition, physical and mental health may also affect employment (Brush, 2000; Danziger et al., 2000; Kalil, Schweingruber, & Seefeldt, 2001; Seavey, 1996; Tolman & Rosen, 2001). Among a sample of inner-city minority mothers, repeated episodes of prolonged depression were highly associated with dependency on public assistance (Lehrer, Crittenden, & Norr, 2002). Social support may also be related to employment. Horwitz and Kerker (2001) found that women who reported frequent help from family and friends were more likely to be working than those who reported little help.

### The Current Study

Although several studies have examined the factors related to women's employment, only a few have considered whether domestic violence interferes with work in the context of other work-related variables (e.g., Browne et al., 1999; Danziger et al., 2000; Lloyd, 1997; Votruba-Drzal et al., 2002). Violence may result in physical injuries or poor mental health that may override high levels of human capital or other factors that have an impact on a woman's employment prospects. Conversely, stringent work requirements in order to receive benefits may outweigh the deleterious effects of violence. Previous research indicates that the relationship between domestic violence and employment is complex, requiring consideration of nuanced dimensions of both violence and employment as well as other factors that may affect the ability to work (e.g., Bell, 2003; Danziger, et al, 2000; Meisel, Chandler, & Rienzi, 2003). Past violence may have less of an effect on current employment outcomes than recent violence, for example, if current injuries such as a broken leg or bruised face prevent women from going to work, and various aspects of economic self-sufficiency may be affected by violence in different ways. Other work-related variables, such as the demands of the role of mother, may also be associated with employment stability. The current study uses data from a three-year period to examine the effects of past and recent violence separately while also considering other work-related variables. Specifically, we examine the association of past and recent violence as well as other variables with work stability over time.

## What Factors Are Associated with Work Stability Over a Three-Year Period?

- **Recent but not past abuse was associated with a reduction in employment stability.** Women with a lifetime history of domestic violence were not different from other women in terms of their work stability. However, women who reported a recent experience with intimate partner violence at work worked fewer months than other women.
- **Higher levels of human capital were associated with more work stability.** Over the course of the study, women with higher levels of education, more work experience and increased job skills experienced more work stability.

To analyze the data, we examined associations across time among several factors related to employment stability. First we assessed the prevalence of potential obstacles to employment at each interview. Then, we used hierarchical linear regression to examine associations between those obstacles and employment stability over a three-year period.

Hierarchical linear regression was used to predict the percent time employed across the three waves of data collection. Examination of the inter-correlations among all the variables included in the regression equation revealed that only 2 of the 144 correlations were above the  $r = .40$  level, and none of these were above the  $r = .50$  level, indicating a minimal probability of problems associated with collinearity.

Not surprisingly, Depression correlated .48 with a perceived need for mental health treatment, and Social Support correlated .49 with Depression. Furthermore, the direction of significant beta weights was consistent with the direction of significant correlations between the variables of interest and work stability, indicating a minimal probability of problems associated with suppressor effects. (The correlation matrix is available on request from the authors.)

Entering the baseline variables as one block and then entering the average of the repeated measures from across the three waves of data collection as a separate block yielded an overall r-square of .277, indicating that our model was able to account for more than a quarter of the variance in work stability for our sample. As can be seen in Table 3, the baseline variables accounted for 14.5% of the variance in work stability. Significant positive relationships were observed between the percent time employed across the three waves of data collection (work stability) and highest level of education, years worked for pay since age 18, and job skills. Significant inverse relationships existed between work stability and chronic health problems, age at first child's birth, family of origin welfare status, and number of children. A lifetime history of domestic violence, frequent substance use, and minority status were not significantly associated with work stability.

Adding the average of the repeated measures collected Waves 1, 2 and 3 as a second block to the regression equation yielded a significant 13.2% increase in r-square. As can be seen in Table 3, a significant positive relationship was observed between work stability and social support. Significant inverse relationships were observed between work stability and recent job training, number of children since baseline (births plus pregnancies), and recent experiences with intimate partner violence. Childcare concerns, depression, and a perceived need for mental health treatment were not significantly related to work stability.

*Exhibit 6-1. Regression results predicting work stability across the three interviews*

Table 3

Regression Results Predicting Work Stability Across the Three Interviews

Variables	Baseline		Average of Waves 1-3	
	B(Std. Error)	Beta	Std. Error	Beta
<i>Baseline Variables</i>				
Minority status	.019(.034)	.020	.036(.032)	.038
Highest grade	.025(.007)	.135***	.020(.006)	.110**
Years worked for pay				
Since age 18	.040(.010)	.158***	.024(.009)	.096**
Chronic health problems	-.136(.026)	-.178***	-.098(.025)	-.129***
Age at first child's birth	-.010(.003)	-.117**	-.005(.003)	-.060*
Job skills, Holzer version	.015(.004)	.132***	.018(.004)	.158***
History of abuse	.007(.011)	.022	.036(.011)	.109***
Family received welfare	-.048(.014)	-.120***	-.039(.013)	-.096**
Frequent alcohol or drug use	-.080(.053)	-.051	-.063(.049)	-.040
Number of children	-.011(.006)	-.061*	-.004(.006)	-.023
<i>Repeated Variables</i>				
Recent job training	---	---	-.154(.020)	-.250***
Number of childcare concerns	---	---	-.005(.008)	-.020
Number of children since last interview	---	---	-.032(.011)	-.096**
Social support	---	---	.023(.007)	.119***
Depression	---	---	-.003(.002)	-.060
Perceived need for mental health treatment	---	---	.059(.074)	.030
Recent abuse	---	---	-.073(.013)	-.184***
Number of observations	789			
Change in R-Square		.145***		.132***
Model R-Square		.145		.277

*Note.* Work stability is the percentage of months worked across all three interviews.

\*  $p < .10$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

## Discussion

Recent job training, having additional children, and recent intimate partner violence were inversely related to work stability. Participation in job training precludes employment; hence the association between fewer months worked and job training. Births plus pregnancies also are likely to interfere with women's ability to work. Perhaps most important is the relationship between intimate partner violence and work stability. Although a lifetime history of intimate partner violence did not predict work stability, recent violence appears to be linked to unstable employment. Higher levels of recent violence are associated with fewer months worked. Moreover, the effect of violence is significant even in the presence of other work-related factors such as human capital.

Some aspects of the role of mother are related to work stability. As mentioned above, births plus pregnancies are likely to interfere with work. Additionally, those who were younger when their first child was born, whose family of origin received welfare and those who had more children, were likely to work fewer months. Although not measured in the current study, prejudice against women on welfare may be double-edged: others may assume that women are neglecting their children when they work but are excessively dependent on the state when they receive public assistance. Women's missing work because of family responsibilities may activate these prejudices in the minds of observers.

Other factors are also related to work stability. As human capital theory would predict, higher levels of education, work experience, and job skills were associated with greater work stability. In addition, chronic health problems are related to working fewer months, while social support appears to enhance women's ability to maintain work. In general, rates of social support, depression, and perceived need for mental health treatment did not vary a great deal over time (although the differences over time were significant, perhaps because of the large sample size).

The baseline measures as a group significantly predicted employment stability, but the change in R-squared from Block 1 (baseline measures) to Block 2 (repeated measures) was also significant, which suggests that employment stability is not determined only by unchangeable aspects of women's past lives. Employment outcomes may be improved by addressing current problems, perhaps with the help of policies that assist TANF recipients in escaping abusive relationship or reducing partner's likelihood of violence. The association between recent intimate partner violence and fewer months of employment requires further analysis. Opportunities for abuse may increase when women are unemployed, and/or violence may cause physical or psychological injuries that make stable employment difficult (Votruba-Drzal et al, 2002). The data presented here, as with other large quantitative studies on this topic, is limited in its lack of precision about the specific timing of the onset of violence relative to employment. Does violence immediately precede employment, or vice versa (or do both occur simultaneously)? Another limitation is the focus of measurement on acts of violence. Abuse may not consist simply of physical hitting etc, but also may include the state of terror that women may experience even in the absence of physical manifestations of violence (see Smith et al., 1999). Fine-grained longitudinal studies using multiple methods to examine the timing and nature of abuse and employment may be necessary to illuminate this relationship fully.

Other factors not included in this analysis, such as local unemployment rates, also may affect work/welfare status. Additionally, we may need to look not only at women's employment but also at men's. Partial support for this proposition comes from a study that found that income disparities favoring women, rather than overall family resources, predicted men's violence toward their wives (McCloskey, 1996). Furthermore, stable employment itself is not a guarantee of economic self-sufficiency (Cancian & Meyer, 2000). Although women who move from welfare to work tend to have higher household incomes and to be better off in other ways than those who remain on public assistance, getting off welfare does not necessarily mean getting out of poverty (Danziger, Heflin, Corcoran, Oltmans, & Wang, 2002).

Behind the recent changes in welfare policy is the assumption that women receiving public aid do not work out of choice, perhaps because they are lazy or have become dependent on public assistance (Seavey, 1996). Yet the findings of this study indicate that women on welfare face considerable obstacles to employment. Women in the U.S. today are expected to adhere to a male model of work in which life is organized around employment while simultaneously fulfilling their caretaking obligations. That poor women are able to do so in the face of so few resources - and when subjected to violence - is a testament to their commitment and to their resilience.

# Chapter 7: Effects of Abuse on Health and Employment

## Introduction

Intimate partner violence in the United States is a major public health problem. Almost 5 million incidents of intimate partner violence against women occur each year, and there is a strong link between abuse by an intimate partner and poor health outcomes (Campbell & Lewandowski, 1997; Golding, 1999; Plichta, 1996; Tjaden & Thoennes, 2000). Abuse and health are related in another way as well: both function as obstacles to employment stability. Abuse and poor physical and mental health have each been linked to unemployment, underemployment, chronic dependence on welfare, and lost workplace productivity (Danziger et al., 2000; Riger & Staggs, 2004; Rodriguez, Lasch, Chandra, & Lee, 2001). But researchers have not yet shown how these three factors are related over time. Here we examine how recency and chronicity of violence affect health and employment and test the hypothesis that health mediates the relationship between abuse and employment stability over time using a sample of current and former public assistance recipients. An exploration of the negative effects of intimate partner violence on health, and of health on employment, among low-income women is especially important now that recipients of public aid in the United States are required to be employed.

## Theoretical Considerations

Our study tests several theories of how abuse might impact women's health and employment. One way of conceiving of abuse is as a stressor, where chronic abuse has more negative effects than isolated events of abuse due to the ongoing nature of the trauma (Bogat, Levendowsky, von Eye, & Davidson, 2003). Traumatic stressors such as chronic intimate partner violence are associated with decreased access to helpful resources and increased mental and physical health problems (Herman, 1992; Mitchell & Hodgson, 1983). The effects of abuse, combined with extant stressors created by poverty and welfare reform, may increase the physiological stress response, which over time can deteriorate both physical and mental health (Campbell, 2002). The dose-response theory of abuse on health suggests that women who are chronically abused will experience worse health outcomes than other abused women (Campbell, 2002; Koss, Koss & Woodruff, 1991; McCauley et al., 1995). Research also suggests that if abuse stops, women's health gradually "rebounds" to pre-abuse levels, although it remains poor if the abuse continues (Sutherland, Bybee, & Sullivan, 1998; Campbell & Soeken, 1999). Therefore, we would expect to see poorer health outcomes for chronically abused women when compared to women experiencing only recent or past abuse.

However, these theories have not been tested among welfare samples. And as no attempt has been made to link the three related variables – abuse, health and employment – over time, we posit an exploratory hypothesis that abuse at one point in time will affect employment two years later, but that health one year later will fully mediate the abuse-employment relationship.

## Welfare Reform and Intimate Partner Violence

Welfare regulations now require recipients to work in order to receive benefits. This requirement might exacerbate abuse, increase stress, or reduce access to health care because abusive men typically seek to keep women dependent by controlling and isolating them. Men might sabotage women's attempts to become economically self-sufficient by using such tactics as refusing to provide transportation and child care, harassing women in the workplace, or inflicting visible bruises the night before a critical job interview (Brush, 2002; Raphael, 2002; Riger, Ahrens, & Blickenstaff, 2000). If women do get jobs, they may make more money than their partners, and such economic power differentials are linked to



increased incidences of abuse (Fox, Benson, Maris, & De Wyk, 2002; Hotaling & Sugarman, 1990; McClosky, 1996). In addition to increasing abuse, being caught between potentially contradictory demands of partners and requirements of welfare reform could amplify stress levels among women.

Obtaining steady employment could itself be a significant stressor for poor women. Seeking jobs and securing reliable childcare can be difficult, and women with low levels of human capital factors such as education and work experience often have access only to low-wage, unstable employment that does not offer health insurance. These jobs may provide women little opportunity to exert personal control over their work environment or job tasks, yet require considerable effort (such as finding transportation and day care or thwarting abuser attempts at work sabotage). Precarious employment creates job strain, which increases mental and physical stress-related illness in the long term (Lewchuk, de Wolff, King & Polanyi, 2003).

Welfare reform may also inadvertently limit access to health care services. Before welfare reform, women who applied for cash assistance were automatically enrolled in Medicaid, but welfare reform severed this link. States were required to develop quickly a new application process for the Medicaid program and new strategies for ensuring access to the program. Although the de-coupling of Medicaid and cash assistance was done to allow women who reached cash assistance time limits to continue receiving Medicaid, the strategy may have backfired. The separate application process and changes in long-standing rules may be decreasing Medicaid program participation among welfare leavers, perhaps because women are unaware that they can receive Medicaid without also receiving cash assistance, or because they find the new application process daunting (Boonstra & Gold, 2002). Medicaid participation among women of childbearing age dropped 24% between 1994 and 1999. Participation typically drops from 90% to 57% the first quarter after welfare exit (Acs & Loprest, 2001; Boonstra & Gold, 2002). Access to government-subsidized health insurance is especially critical for poor women, because low-skill jobs often do not offer health insurance benefits. Women moving from welfare to low-wage work might be uninsured if they are no longer receiving Medicaid and cannot afford to pay out-of-pocket for health insurance.

### **Prevalence of intimate partner violence and health problems among poor women**

The negative impact of abuse and poor health on employment stability may be greater among the poor than among members of the general population because the prevalence of abuse and poor health may be higher in the low-income population. Results from the redesigned National Crime Victimization Survey indicate that women with incomes of less than \$10,000 are more likely to be abused by a partner than women with higher incomes. Among 19,000 women in a pooled multi-state sample, those with incomes below \$25,000 were almost twice as likely to experience abuse, and low income was one of the three most important risk factors for intimate partner violence (Bachman & Saltzman, 1995; Vest, Catlin, Chen, & Brownson, 2002). Women living in poverty are three times as likely as women of greater economic means to report a chronic health problem (National Center for Health Statistics, 2003). A nationwide study found that in 2001, those living in poverty were twice as likely as those with higher incomes to report fair or poor health and have no usual health care source, and a recent review of health inequalities found that poverty was one of the most powerful predictors of inadequate access to and insufficient use of health care services (Ayanian, Weissman, Schneider, Ginsburg, & Zaslavsky, 2001; National Center for Health Statistics, 2003). In addition to individual and familial stressors, poor women's health is negatively affected by poverty-specific factors such as discrimination against welfare recipients, crime-and drug-ridden neighborhoods, substandard housing, and inadequate community-based social services (Schulz, Parker, Israel, & Fischer, 2001). These non-abuse-related stressors in women's lives could exacerbate the impact of the stress caused by abuse (Bogat et al., 2003).

### **Effects of abuse on health among poor women**

Rates of abuse and poor health are high among the poor, and poor women who have suffered abuse have worse health outcomes than those without a victimization history, perhaps because abuse has a stronger negative effect on health than does poverty. Among a community sample of 397 poor women, both abuse and poverty negatively affected women's physical health, but abuse had a negative effect beyond that of poverty (Sutherland, Sullivan, & Bybee, 2001). A study of 753 welfare recipients in urban Michigan found that abused women had higher rates of depression, post-traumatic stress

disorder, and substance abuse than nonabused women (Tolman & Rosen, 2001). Among a representative statewide sample of 734 female welfare recipients in Massachusetts, a higher percentage of abused than nonabused women reported physical disabilities and chronic physical health problems (Allard, Albelda, Colten, & Cosenza, 1997). Because abuse works through stress to affect both physical and mental health, abused women are more likely than other women to report multiple chronic health problems and more likely to experience mental health and stress-related physical health problems such as sleep difficulties, gastrointestinal problems, gynecological abnormalities, headaches (Coker et al., 2002; Sutherland et al., 2001; Talley, Fett, & Zinsmeister, 1995).

The pattern of abuse over time also influences health outcomes. In a longitudinal study of the effects of abuse on health among 98 battered women, health problems subsided after the abuse ended, which supports findings from other studies suggesting that recently abused women are in poorer health than women abused in the past (Campbell & Soeken, 1999). Women in two representative statewide samples of welfare recipients who were abused within the past year rated their health as poorer, had more physical limitations, and reported more distress than past victims, although past victims were in poorer health than never-abused women (Allard et al., 1997; Tolman & Rosen, 2001).

All types of intimate partner violence are harmful to women's health, but the effects of abuse on health vary as a function of the type of abuse women experience (Bennice, Resnick, Mechanic, & Astin, 2003; Golding, 1999; Sutherland, Bybee, & Sutherland, 1998). Battering may directly affect health by causing injuries; non-injurious violence may affect health indirectly, primarily by increasing stress and depression (Campbell, 2002; Sutherland, Bybee, & Sullivan, 2002). Physical abuse may result in injuries and stress-related physical problems such as insomnia and gastrointestinal difficulties. Psychological abuse may create or exacerbate mental health problems, whereas sexual abuse is associated with gynecological problems (Campbell, 2002; Coker et al., 2002; Golding, 1999; McCauley et al., 1995). Researchers have also found that intimate partner violence has a dose-response effect on health: increases in violence severity produce proportionate increases in health problems (Campbell, 2002; Eby, 1996; Koss et al., 1991).

### **Abuse and health problems as obstacles to employment stability**

Given the stresses produced by welfare reform, the high prevalence of abuse and health problems among the poor, and the negative effects on health of abuse even after poverty is accounted for, it is no surprise that both abuse and health problems have been identified as obstacles to economic independence among poor women, interfering with their ability to obtain and sustain employment. A recent review of 26 studies of abuse and employment among welfare recipients found that abusive partners use tactics designed specifically to keep women from working or attending school. While abuse is not strongly associated with whether or not women are working, it is consistently associated with welfare recidivism, working fewer hours and making less money from employment (Riger & Staggs, 2004). Women in a Pennsylvania job-placement program whose partners told them that good mothers do not work were five times as likely as other women to drop out of the program, and among low-income women in a Michigan study, abused women were less likely to be employed, and recently abused women were more likely to be dependent on welfare than other women (Brush, 2000; Danziger & Seefeldt, 2002). In a study of poor women in Washington State, Smith (2001) found that physical abuse survivors made \$2,000 less than nonabused women, and those who experienced both physical and sexual abuse made almost \$4,000 less per year than women who had never been abused. Several studies find that poor physical and mental health results in reduced labor force participation, unstable employment, and lower earnings for low-income women (Danziger et al., 2000; Lloyd & Taluc, 1999; Tolman, Danziger, & Rosen, 2002). Among a sample of welfare recipients in Connecticut, those with physical health problems were more than three times less likely to be working than women who did not have such problems (Horowitz & Kerker, 2001). A study of urban poor women found that those with mental and physical health problems worked less frequently than healthy women and women with either physical or mental health problems (Danziger, Kalil, & Anderson, 2000). A nationally representative sample of over 4,000 low-income mothers found that the likelihood of employment was 25% lower for those with psychiatric disorders (Jayakody & Stauffer, 2000), and among women participating in a Florida welfare-to-work program, those with mental health problems

were more likely to remain on welfare than their mentally healthy counterparts (Boothroyd & Olufokunbi, 2001).

In 2004, poor women are under pressure from welfare requirements to work if they want public assistance. Yet rates of abuse and poor health, both obstacles to employment and markers for welfare dependency, are disproportionately high among poor women. To make matters worse, abuse is associated with an increase in the incidence of physical and mental health problems. Researchers have explored the relationships between abuse and health, abuse and employment, and health and employment but have yet to explore simultaneously the interrelationships among these variables. This study examines how abuse history directly affects health and employment and explores the indirect effects of abuse by testing the hypothesis that health mediates the relationship between abuse and employment over a three-year period.

### The Current Study

The Illinois Families Study (IFS) is a longitudinal study of the effects of welfare reform on a statewide representative sample of 1311 female welfare recipients in Illinois. The IFS data allow us to examine abuse, health and economic outcomes prior to and during the study using data from annual interviews conducted during the study's first three years. We test both direct and indirect effects of intimate partner violence on health and employment on women who completed the first three interviews of this study. We examine how past, recent, and chronic abuse affect employment and health and test the mediational effects of health on the abuse-employment relationship over time.

Based on the dose-response and rebound theories, we hypothesize that chronically abused women will have poorer health and worse employment outcomes than will women who have experienced only past, recent or intermittent abuse. We also propose that health mediates the relationship between abuse and employment outcomes over time. This mediational model synthesizes previously unrelated research on abuse, health and employment and accounts for research suggesting that only recent abuse is directly associated with employment outcomes by hypothesizing that over time, past abuse does affect employment but does so indirectly through its stress-related effects on health.

### What Patterns of Abuse Occurred Over Time?

- **Over time, women experienced varied patterns of abuse.** Over 60% of the women in our study reported no past abuse and no abuse during the three years of the study. Others were abused only in the past (16%). Some women (9%) experienced only recent abuse, whereas others were abused intermittently (6%) and chronically (4%).

Our longitudinal data allow us to group women by abuse pattern to account for both the recency of abuse and its chronicity over time. In Year 1, we asked women whether they had ever experienced a number of abusive acts by intimate partners. If they answered yes, we then asked if they had experienced abuse in the past year. In Years 2 and 3, we asked women whether they had experienced abuse by an intimate partner since their last interview. We divided women into five groups based on their responses at each annual interview. Over 60% (n = 663, 65.4%) of the sample had never experienced abuse. Women in the Past Only group (n=159, 15.7%) had experienced abuse in the past but not in the last three years, whereas women in the Recent Only group (n=93, 9.1%) had experienced abuse only in the last three years. Women in the Intermittent group (n=64, 6.3%) had experienced abuse in the past and in one of the last three years. Women in the Chronic group (n=36, 3.5%) had experienced abuse in the past and in more than one of the last three years. We used Analysis of Variance and Chi Square tests to detect demographic and socioeconomic differences as a function of abuse pattern, and found no differences in income or prior work history. There were differences in age, age at first child's birth, education and job skills by abuse pattern; we therefore included these variables as covariates in our analyses where appropriate. Abuse pattern was not associated with

ethnicity, but we included minority status as a covariate in our analyses given its known association with poor health and employment outcomes.

### How Did Abuse Patterns Affect Employment Stability?

- **Recently abused women had less stable employment than did women never abused or abused only in the past.** Women who were recently abused did not work less than women who were intermittently or chronically abused, however.

Next, we examined whether abuse patterns were associated with the percentage of time women worked over the three years of the study. We hypothesized that chronically abused women would have the poorest employment outcomes because the impact of chronic stress in women's lives would render them less able psychologically to perform the demanding tasks of seeking, getting and keeping a job. As shown in Exhibit 7-1, ANCOVA results show that abuse patterns were associated with employment stability. But our hypothesis was not confirmed, although these findings are in keeping with other studies of this population that suggest recent rather than past abuse has a stronger direct effect on employment. The Recent Only group, working 37.23% of the time, exhibited the least stable employment and worked less than women in the No Abuse and Past Only groups. The Chronic and Intermittent groups worked less than half the time. The No Abuse group worked almost half the time, but the Past Only group, which worked in 54.52% of available months, was the only group to work more than half the time. There were no differences in employment stability over the three-year period of the study between the No Abuse, Past Only, Chronic and Intermittent groups, nor were there differences among the Recent Only, Intermittent and Chronic groups. We also entered 8 covariates into the equation to control for known associations with employment stability and pre-existing demographic differences on the abuse patterns variable. Of those, social support, years worked for pay since age 18, highest grade, and number of job skills were associated with more stable employment, whereas the number of health problems women reported having during the study was associated with less stable employment.

### How Did Abuse Patterns Affect Health Problems?

- **Chronically abused women had more health problems than other abused women.** Women who experienced chronic abuse reported having more health problems during the study than did women who were intermittently and recently abused as well as women who were abused only in the past.

As shown in Exhibits 7-1 and 7-2, we also used ANCOVA to examine how abuse pattern was associated with the total number of health problems women reported having during the three years of the study. In contrast to the effects of abuse on employment stability, where women who were recently abused experienced the worst employment outcomes, here our hypothesis that chronically abused women would have the poorest health outcomes was confirmed.

Women in the Chronic group had worse health outcomes than women in any other group, reporting on average 2.04 serious health problems, compared to less than one problem in the Recent Only group, which had the second-highest mean health problem score. Women in all other groups reported less than one health problem on average. We also controlled in this equation for known associations with health problems and demographic differences on the abuse pattern variable. Of the four covariates, age was positively associated with number of health problems and social support was inversely associated with health problems.

*Exhibit 7-1. Adjusted means, standard deviations and group differences on health problems and employment stability as a function of abuse pattern*

	None (n = 545)		Past only (n = 131)		Recent only (n = 83)		Intermittent (n = 43)		Chronic (n = 32)		F test
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	
Percentage of time employed (range = 0-100)	48.00	1.26	54.52	2.60	37.29 <sup>a*</sup>	3.23	41.67	4.52	40.11	5.34	F (4,821)=5.09***
Number of health problems (range = 0-16)	0.74	0.07	0.62	0.15	0.88	0.16	0.71	0.26	2.04 <sup>b**</sup>	0.31	F (4,905)=4.60***

<sup>a</sup>different from none and past only groups. <sup>b</sup>different from all other groups.

\*\*\* $p < .001$ . \*\* $p < .01$ . \* $p < .05$ .

*Exhibit 7-2. Summary of analysis of covariance results on employment stability and health problems as a function of abuse pattern*

Employment stability					
Source	df	SS	MS	F	$\eta^2$
Covariates					
Age	1	39.31	39.31	.05	.00
Age at birth of first child	1	1950.95	1950.95	2.34	.00
minority status	1	82.51	82.51	.10	.00
social support	1	5599.28	5599.28	6.70**	.01
Years worked for pay since age 18	1	10504.19	10504.19	12.58***	.02
Highest grade	1	8221.76	8221.76	9.84**	.01
Number of job skills	1	12145.90	12145.90	14.54***	.02
Number of health problems	1	13659.36	13659.36	16.35***	.02
Abuse Pattern	4	17006.07	4251.52	5.09***	.02
Error	821	685780.77	835.30		
Total	833	799283.93			
Adjusted R <sup>2</sup> = .13					
Health problems					
Source	df	SS	MS	F	$\eta^2$
Covariates					
Age	1	126.87	126.87	44.14***	.05
Age at birth of first child	1	.01	.01	.00	.00
minority status	1	2.70	2.70	.94	.00
social support	1	130.45	130.45	45.38***	.05
Abuse Pattern	4	52.83	13.21	4.60***	.02
Error	905	2601.06	2.87		
Total	913	2995.67			
Adjusted R <sup>2</sup> = .12					

\*\*\* $p < .001$ . \*\* $p < .01$ . \* $p < .05$ .

## Does Health Mediate the Relationship Between Abuse and Employment?

- **Health mediates the relationship between abuse and employment over time.** Abuse at Year 1 was associated with decreased employment stability in Year 3, but that effect disappeared when health problems in Year 2 were accounted for. Results suggest that health fully mediates the abuse-employment relationship over time.

Here we test a mediational model of how abuse might affect employment stability over time through health that links empirical findings suggesting that abuse is associated with reduced health outcomes, which are in turn associated with negative employment outcomes. Research has also found that recent rather than past abuse is more directly associated with negative employment outcomes but has not fully explored how past abuse might indirectly affect employment. Our model uses percentage of time worked in Year 3 as the outcome variable and posits that the amount of abuse women experience in Year 1 will decrease their ability to work consistently two years later in Year 3, but that the effect will be fully mediated by the negative effect of Year abuse on their physical and mental health in the interim at Year 2.

Four conditions must be met for mediation to occur (Baron & Kenny, 1986). The independent variable, in this case abuse in Year 1, must affect the dependent variable, in this case the percentage of time worked between Years 2 and 3. The independent variable must affect the mediator, in this case the number of chronic health problems women reported in Year 2, and the mediator must affect the dependent variable. If those three conditions exist, a mediational relationship is likely to exist. In a fully mediational relationship, when influence of the mediator is accounted for, the relationship between the independent and dependent variables is zero. This is in contrast to partial mediation. In a partially mediated model, the independent variable still influences the dependent variable after the influence of the mediator is accounted for. Its influence is just not as strong as it was before the mediator was entered into the equation.

To test for full or partial mediation, we used the Preacher and Leonardelli (2003) interactive calculation for the Sobel test to determine whether the influence of abuse on employment stability was significantly different from zero after the influence of health was accounted for. A significant Sobel test indicates partial mediation, whereas a non-significant test indicates full mediation, as it confirms that when the influence of the mediator on the dependent variable is accounted for, the relationship between the independent variable and the dependent variable is not significantly different from zero.

Exhibit 7-3 shows the range, mean, and standard deviation for all variables used in our analyses. As in the prior set of analyses, we controlled for known associations and potential confounds in all equations. Results shown in Exhibit 7-4 indicate that health fully mediates the relationship between abuse and employment stability over a three-year period. All conditions necessary for mediation were met. In Equation 1, the independent variable, amount of abuse in Year 1, was related to the dependent variable of Year 3 time worked. In Equation 2, we found that Year 1 abuse was related to the mediator, Year 2 health. Equation 3 shows that Year 2 health, the mediator, is also related to the dependent variable, Year 3 employment stability. Nonsignificant Sobel test results indicate that when Year 2 health is accounted for, the influence of Year 1 abuse on Year 3 employment stability is not significantly different from zero, which means that health fully mediates the abuse-employment stability relationship.

*Exhibit 7-3. Ranges, means and standard deviations for variables included in regression analyses*

Variable	Range	Regression Analyses					
		Equation 1: W1 Abuse on W3 Employment Stability (N = 905)		Equation 2: W1 Abuse on W2 Health Problems (N = 1000)		Equation 3: W2 Health Problems on W3 Employment Stability (N = 886)	
		<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
<b>Control Variables</b>							
Age	18-58	---	---	31.50	8.19	---	---
Years worked for pay since age 18	0-10 or more	3.07	1.26	---	---	3.06	1.26
Number of job skills	0-9	5.17	2.73	---	---	5.16	2.74
Highest grade	2-18	11.77	1.69	---	---	11.75	1.70
Number of abusive acts experienced prior to Year 1	0-21	2.20	4.48	2.16	4.48	2.22	4.50
Number of abusive acts experienced at Year 2	0-21	1.01	3.43	0.95	3.29	1.03	3.47
Number of abusive acts experienced at Year 3	0-15	0.56	1.81	---	---	0.56	1.82
Social Support	4-12	10.42	1.64	10.36	1.68	10.42	1.65
Number of health problems at Year 1	0-16	0.80	1.86	0.40	0.99	0.38	1.00
Number of health problems at Year 3	0-16	0.80	1.86	---	---	0.17	0.56
Total number of health problems	0-16	0.80	1.86	---	---	---	---
<b>Variables of Interest</b>							
Number of abusive acts experienced at Year 1	0-16	0.52	2.10	0.47	1.97	2.22	4.50
Number of health problems at Year 2	0-10	---	---	0.24	0.78	0.24	0.80
Percentage of time worked at Year 3	0-100	50.40	39.27	---	---	50.41	39.10

Note: Correlation matrices available on request from the authors. No correlation exceeded .50.



*Exhibit 7-4. Summary of regression results testing relationships among abuse, health problems and employment stability*

Relationship Testing	B	SE B	$\beta$
<i>Equation 1 (N = 905): Year 1 abuse (independent variable) and Year 3 percentage of time employed (dependent variable)</i> Year 1 abuse F (9,895) = 12.28***, Adjusted R <sup>2</sup> = .10, R = .33	-1.62	0.67	-0.09*
<i>Equation 2 (N = 1000): Year 1 abuse (independent variable) and Year 2 health problems (mediator)</i> Year 1 abuse F (6,993) = 49.01***, Adjusted R <sup>2</sup> = .22, R = .48	0.03	0.01	0.07*
<i>Equation 3 (N = 886): Year 2 health problems (mediator) and Year 3 percentage of time employed (dependent variable)</i> Year 2 health problems F (10,875) = 9.93***, Adjusted R <sup>2</sup> = .09, R = .32	-4.07	1.91	-0.08*
Model Testing: Determination of Full or Partial Mediation			
Unstandardized coefficient of Year 1 abuse on Year 3 percentage of time employed = -1.62, error term = 0.67	Sobel test statistic = -1.49, ns		
Unstandardized coefficient of Year 2 health problems on Year 3 percentage of time employed when Year 1 abuse is also a predictor = -3.61, error term = 1.90			

Note: Control variables were entered as the first block in all regression equations. Change in Rsquared from block 1 to block 2 was significant for all equations. Significance of control variables for each equation is as follows: Equation 1 - social support\*\*\*, highest grade\*\*\*, number of job skills\*\*\*, total number of health conditions\*\*\*; Equation 2 – number of health problems at Year 1\*\*\*, social support\*\*\*; Equation 3 – number of health problems at Year 1\*, number of health problems at Year 3\*, social support\*\*\*, highest grade\*\*, number of job skills\*\*\*.  
\*\*\* $p < .001$ . \*\* $p < .01$ . \* $p < .05$ .

## Discussion

This study is one of the first to provide evidence that recent and chronic intimate partner violence differentially impacts women and that health mediates the relationship between abuse and employment stability over time. ANCOVA results underscore the importance of distinguishing among different patterns of abuse. Accounting only for recent abuse puts researchers at risk of misattributing negative outcomes to its impact, when they may be due instead to the pattern of abuse over time (Bogat et al., 2003; Johnson & Ferraro, 2000).

These results also suggest that recently abused women are less able to work steadily than women who have no or past experiences with abuse. This could be a function of abuser attempts to thwart women's efforts to gain economic independence (Riger et al., 2000). However, we expected a clearer pattern of results here, with chronically and perhaps intermittently abused women experiencing less stable employment than nonabused women or women abused only in the past. One possible explanation for the lack of clarity in these results is that the eight items we used to measure abuse in these analyses were not sufficient to produce a definitive outcome. We were limited to those eight items because of the change in abuse measures in Year 3; they were the only items common to all three years. Future research should delineate the effects of abuse patterns over time on both health and employment stability perhaps by using a more comprehensive measure of abuse and specifying how physical, sexual and psychological abuse impacts both physical and mental health.

Results of our second ANCOVA were clearer, with chronically abused women suffering more health problems than women in any other group, including the Recent Only and Intermittent groups. Even given the already high levels of abuse and poor health experienced by those living in poverty, chronically abused women in our sample had poorer health outcomes than nonabused and sporadically abused women, providing further support for Sutherland, Sullivan and Bybee's (1999) hypothesis that chronic abuse has a negative effect on health beyond that of poverty. The more intimate partner violence women experienced, the poorer their health, suggesting that the dose-response effect (e.g., Campbell, 2002; Eby, 1996) found by researchers among the general population also holds for low-income women: health problems increase in direct proportion to the amount of abuse women experience over time.

Mediational analyses provide support for our hypothesis that health mediates the relationship between abuse and employment outcomes. Abuse appears to manifest as physical and mental health difficulties a year after it occurs. These health problems in turn are associated with unstable employment a year later. Our model provides a useful framework for conceiving of the interrelationships among abuse, health and employment over time and synthesizes disparate findings from other studies of this population that suggest that past abuse has no effect on employment. These results suggest that researchers should test more thoroughly the indirect effects of abuse on employment, exploring the mediational role of health in relationship to both employment and welfare recidivism. Further, abuse at Year 1 had no effect on the percentage of time worked after the effect of Year 2 health was accounted for. Therefore, our analyses suggest that health fully mediates the relationship between abuse and employment over three years. Non-injurious intimate partner violence may reduce the quality of women's physical and mental health by increasing levels of stress. In turn, physical health problems may keep women from obtaining employment for which they are not physically able, which may increase their reliance on welfare or serve to make them less productive if they are already working. Mental health problems may decrease women's motivation to seek employment, keeping them dependent on welfare, or it may reduce their ability to keep jobs through absenteeism or by reducing job performance quality.

This study has several limitations that should be considered. We did not rule out mediational variants such as moderating mediation that according to Baron & Kenny (1986) could also

account for the results of our regression analysis. Nor did we explore the effects of abuse on specific health problems such as depression, or the effects of ethnicity on health or employment although differential effects have been documented in other studies (e.g., Campbell & Soeken, 1999; Honeycutt, Marshall, & Weston, 2001). Future research should address these limitations. In addition, researchers should explore protective factors such as social support, which was associated with better health and more stable employment in these analyses, as well as the role of employment in creating better health, and the impact of specific welfare reform programs on rates of domestic violence and health care service utilization. The mediational model proposed here should be confirmed with non-welfare samples, perhaps through structural equation modeling using stress as a mediator of the abuse-health relationship.

The relationship between abuse, health and economic outcomes occurs in a context in which poverty and welfare reform may increase levels of abuse and health problems and limit access to domestic violence and health care services. To reduce the negative effects of welfare reform on abuse dynamics, welfare programs that have been shown to reduce the incidence of intimate partner violence (e.g., Beecroft, Cahill, & Goodson, 2002; Fraker et al., 2002; Gennetian & Miller, 2002; Gibson et al., 2003; Hamilton et al., 2001) should be implemented widely, although practitioners and future researchers should take care to disentangle the confounding effects of program participation and employment when evaluating a program's impact on violence. Exceptions to the "work first" approach should be made for low-income women, especially in times of economic recession or depression when they may be less able to find employment for which they are qualified. Abused women may need health care and other supports before they can successfully move from welfare to work. A comprehensive, perhaps anonymous, treatment referral system might be more effective than the current system (e.g., General Accounting Office, 2001).

To increase treatment access, Raphael (2002) suggests getting health care practitioners more involved in intimate partner violence screening and referral for low-income women, as abusive partners may restrict access to social services organizations but usually allow women to seek medical care for themselves and their children. Also, women who are sanctioned off TANF or who reach time limits should receive Medicaid application packets and be informed that they are still eligible for the program in order to increase health care access among women who no longer receive TANF.

Coordinating inter-agency social services and addressing the multiple needs of low-income women in poor health will increase the chances that these marginalized women can become self-sufficient before reaching their public assistance time limits. Better policies and action to help women escape abuse and deal with mental and physical health problems can benefit state and federal government in the form of reduced public assistance costs. They could also benefit the women themselves, because moving permanently off TANF into the workplace, if women obtain jobs that pay more than welfare, could provide them with the financial independence they need to finally leave their abusive relationships or successfully insist that the abuse must end.

# Chapter 8: Conclusions and Implications

The purpose of this study was to examine the relationship of intimate partner violence and employment among women affected by welfare reform. The findings of this study indicate that on-going abuse interferes with women's ability to sustain employment over time. The effects of abuse on employment are mediated by health problems that women experience. That is, abuse at one point in time likely manifests as health problems as much as a year later, which in turn is related to less employment as much as two years later. The findings of this study have several implications for policy, practice, and research, as follows:

## Welfare Policy Implications

- Federal reauthorization of welfare reform legislation should attend to the deleterious impact of abuse on women's ability to sustain work over time. The Family Violence Option to the welfare reform legislation, which allows flexibility for abused women in meeting some requirements, passed in part because of the fear that violence from intimate partners hindered women's employment. Yet few women have taken up this option (Raphael, 1999). If we are requiring women to work, we must be aware of the increased risk this poses for women in abusive relationships.
- Our findings suggest that intervention through the health care system might be a more effective way to reach victims of abuse. The percent of those in the Illinois Families Study with no health insurance coverage increased from 19% at the time of the first interview to 25% at the second interview and 29.2% at the third interview. Few of those working received employer-sponsored benefits. Expanding income eligibility cutoffs for Medicaid coverage for adults and extending the provision of Transitional Medicaid Assistance to a longer time period may help abused women overcome the effects of abuse.
- The findings of this study suggest that women are more likely to report abuse through written questionnaires that they complete by themselves rather than in an oral interview. During welfare processing, assessing abuse should be done by methods that permit the greatest possible privacy in order to obtain accurate reporting.
- The deleterious impact of intimate partner abuse should be taken into account when considering the promotion of marriage as part of the reauthorization of welfare legislation. The promotion of marriage might tie women more firmly to abusive partners, and thus paradoxically interfere with the key goal of welfare reform, employment.

## Implications for Service Providers

- The frequency of recent abuse, although lower in this study than in others, nevertheless indicates that large numbers of current or former welfare recipients experience violence from intimate partners. Extending services through the health care system might reach victims not otherwise served by domestic violence service providers. But providing services for victims may not prevent or reduce levels of abuse. As welfare rolls drop and as women reach their 5-year time limit on welfare receipt, there is little that distinguishes women who received public assistance from very low-income women in general. Interventions designed to reduce and

prevent abuse among all women might be more effective at sustaining employment among those who receive public assistance than interventions aimed solely at women on welfare.

- Women who are victims of abuse also experience a number of other problems, including more childcare concerns, less social support, and higher levels of depression than women who have never been abused, suggesting a need for coordination of services for this population.
- Domestic violence has an impact not only on the women who experience it directly, but also on children who observe it. Exposure to domestic violence as a child is a risk factor in this study for both domestic violence and sexual assault as an adult. Services for children who witness domestic violence might reduce their risk of victimization in the future.

## Implications for Law Enforcement

- Abuse of women is not only an economic issue; it is also a public safety concern. Lifetime abuse rates found among women in this study indicate that substantial numbers of women suffer abuse. Collaboration between law enforcement, domestic violence and healthcare service providers might help alleviate the negative impact of abuse. In addition, law enforcement should recognize the long-term consequences of exposure to abuse on children when responding to intimate partner violence. Abuse is not only a crime against women who experience it, but it also has consequences for future victimization of children who observe it.

## Implications for Research

- As mentioned above, the findings of this study suggest that women are more likely to report abuse through written questionnaires that they complete by themselves rather than in an oral interview. Other studies have used computer-assisted technology or tape-recorded questions to assess abuse; those techniques were beyond the resources of this study. But allowing women the greatest possible privacy permitted by study resources might promote more accurate reporting.
- Most studies of abuse include only one point in time. This study suggests that a long time frame (here, as long as three years) is required in order to assess the impact of abuse adequately. Only when we combined all three years of employment together did we find results that did not appear on a year-by-year basis.
- Measures of abuse typically rely on some form of the Conflict Tactics Scale. Here we detected abuse not only at home but also at work. Measures of abuse should be expanded to include abuse that may occur in site-specific settings, such as work or school.
- Studies of intimate partner abuse routinely should include measures of health. We found that health problems play an important role as mediators between the effects of abuse and employment. Health problems may be critical to other issues related to abuse, such as whether women are able to resist abuse from their partners.
- Finally, one problem with most quantitative studies of abuse, including this one, is that they are not sufficiently precise about the timing of abuse. That is, we asked about abuse and about employment “in the past year.” We are able to obtain from these data a general idea of whether abuse at one time period is followed by, for example, a decrease in employment in the next time period. But these questions do not allow us to ascertain with greater specificity if abuse immediately followed or preceded employment (or was unrelated in timing) within a particular time period. Using more specific measures of time sequencing in prospective studies might give a more nuanced picture of the timing of abuse and other factors.

## Implications for Theory

- In several areas of this study we compare the predictions of exchange theory, which suggests that an increase in resources will lead to a decrease in abuse, with the backlash hypothesis, which predicts an increase in abuse with greater employment. Results of this study provide more support for the backlash hypothesis.
- Many studies of abuse are atheoretical, providing useful information about particular samples but limited in their generalizability. Theoretical understanding of the dynamics of abuse may be helpful not only to increasing knowledge but also to developing strategies to reduce and prevent such violence.

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# Appendix A: Methodological Issues in the Study of Intimate Partner Violence and Economic Self-Sufficiency

In this chapter, we address methodological issues encountered in the Illinois Family Study (IFS). We examined how best to operationalize intimate partner violence and compared the measurement and data collection protocols of the IFS with two large-scale studies with low-income women receiving public assistance (see Exhibit 1). The Massachusetts Mothers Survey (MMS; Allard, Albelda, Colten, & Cosenza, 1997) sampled a representative group of 734 women over 20 years of age receiving AFDC from January through June 1996. The Women's Employment Study (WES; Danziger et al., 2000) examined the employment experiences of a random sample of 758 low-income women receiving welfare in February 1997.

*Exhibit A-1. Data gathering protocols for three welfare studies of intimate partner violence*

Study, PIs, Sample, Study Context	Mode	Intro to DV set	DV question stem	Scales
Illinois Families Study (IFS): Riger  State-wide representative sample of 1,400 Illinois women on TANF in Sept. 1998	Face-to-face and telephone interviews, DV questions self-administered in face-to-face interviews	Now, I'd like to ask you some questions about your relationships with current and past spouses, (boy/girl) friends, or partners. Some of these questions may feel very personal. We are asking them because it is important to understand how these relationships affect people in both good and bad ways. However, you don't have to answer any questions that make you uncomfortable. Some questions may not apply to you, but we need to ask everyone the same set of questions. I would like to remind you also that everything you say to us will be kept confidential.	Has any current or former spouse or partner ever...or in past 12 months:	Questions from MMS and WES, 2 unique questions
Massachusetts Mothers Survey (MMS): Colten, Allard  Representative sample of state welfare population: 734 women aged 20 or older receiving AFDC in Massachusetts between Jan. and June 1996.	Face-to-face interviews; respondents listened to dv questions via audiotape and wrote down their answers	Now we have a set of questions that may feel more personal to you. So what I'm going to have you do is listen to these questions on tape and answer them on this form. Then you will put the form into this envelope and seal it so I won't know what your answers are. I would like to remind you of our promise that we cannot identify you by name or link you to your answers. When you complete the form, remember to put it in the envelope and seal it.	Has a current or former husband or boyfriend ever:	Modified CTS
Women's Employment Study (WES): Tolman, Danziger  Random sample of 758 single mothers on welfare rolls in an urban Michigan county in Feb. 1997 who were between 18 & 54, white or black and US citizens	Face-to-face interviews	We are interested in learning more about women's experiences of abuse in their relationships. Sometimes this can affect their work lives.	Long: In your current or past relationships, has a husband, partner or anyone you have been in a romantic relationship with ever...or in the past 12 months: Short: Has a husband or partner ever...or in the past 12 months:	Modified CTS

## Measuring Intimate Partner Violence

Estimating intimate partner violence depends on how intimate partner violence (IPV) is defined and measured. Rates of IPV may vary as a function of how narrow or broad the definition of IPV is, which determines what types of violence (e.g., physical, sexual, or psychological violence) will be assessed. In addition, the choice of research participant (i.e., victim or perpetrator) and data collection methods (e.g., self-administered survey, in-person interview, telephone interview) may also result in different prevalence rates of IPV (for a comprehensive discussion of IPV measurement issues see Desai & Saltzman, 2001).

The most widely used measure of IPV has been the Conflict Tactics Scale (CTS) (Strauss, 1979). The CTS has been criticized for the types of violence included in the measure, lack of item specificity, not addressing frequency or the cumulative effect of violence, and omission of contextual factors (e.g., Desai & Saltzman, 2001). The CTS has been modified to address some of these concerns (CTS2 - Straus, Hamby, Sugarman, & Boney-McCoy, 1996). Smith, Earp, and DeVillis (1995) suggested that IPV might better be measured if violence is conceptualized as an ongoing process rather than a series of discrete incidents. Therefore, counting the number of hits, slaps, or rapes does not capture the “lived experience” of battered women. Smith et al. (1995) developed the Women’s Experience with Battering (WEB) scale in response to these concerns. The WEB scale was developed to broaden the conceptualization of violence, move away from assault-based measurement, and better understand battered women’s continual psychological experience of battering. Used in conjunction with measures of physical, sexual, and other forms of abuse, it may offer a more complete understanding of women’s experiences of battering. Other measures used to assess various dimensions of IPV include the Index of Spouse Abuse (Hudson & McIntosh, 1981), Measure of Wife Abuse (Rodenburg & Fantuzzo, 1993), Partner Abuse Scales (Hudson, 1990), and Severity of Violence Against Women Scales (Marshall, 1992).

## Comparison of Intimate Partner Violence Rates

- **Lifetime and past 12-month rates of IPV were lower than those reported in the MMS and WES. Differences in IPV rates may be attributable to contextual variables in the women’s lives and methodological variations between studies.**

We compared the lifetime and previous 12-month rates of IPV reported in the Massachusetts Mothers Survey (MMS) and Women’s Employment Study (WES) with those found in the Illinois Family Study (IFS). The MMS and WES used items drawn from the Conflict Tactics Scale to measure the types and rates of IPV experienced by participants. The IFS used items from the MMS in Waves 1 and 2. Because the rates of IPV were low in Waves 1 and 2 compared to other studies with low-income women, the IFS modified the IPV measure in Wave 3 to include items from the WES (see Exhibit 2). In all three waves, items were also drawn from the Women’s Experience with Battering scale (WEB). The MMS and IFS used the same 9-item index of physical, psychological, and sexual violence, which included a 3-item sub-index of physical abuse as well as a 6-item sub-index of threats, physical abuse, and sexual abuse. The WES included a 5-item threat index, a 2-item physical violence index, a 6-item severe physical and sexual violence index, and a 2-item work interference index. Although some of the MMS and WES items were worded differently and the WES had a larger number of items related to threats and work interference, the IPV lifetime and past 12 months prevalence rates were similar between those two studies. Because the IPV measures from the MMS and IFS are directly comparable, this discussion will focus on these two studies.

As mentioned above, among our Wave 1 sample, although reported lifetime rates of physical abuse (26.8% as measured by the 9-item index) were consistent with rates of 22% to 83% in other studies, only 5.6% (as measured by the 5-item index) of the women in our sample reported current physical abuse. This rate of physical abuse was lower than comparable rates of 10% to 77% among women on

welfare (Tolman & Raphael, 2000). The lifetime and past 12 months rates of IPV were significantly lower for participants in the IFS compared to those in the MMS (see Exhibit 2). The IFS lifetime rate of IPV on the total 9-item index was half of the rate found in the MMS, and the past 12-month rate was nearly a third lower. A similar pattern was repeated across individual items and with the 3-item physical index as well as the 6-item physical, sexual, and psychological index. It is interesting to note that the lifetime and past 12-month prevalence rates in the IFS for the sexual assault item (“forced you to have sex or engage in sexual activity against your will”) were four times lower than the rates reported in the MMS.

One possible explanation for the low rates of intimate partner violence experienced by the women in our sample was that the low rates were a function of how few women (4.5%) were living with an intimate partner at Wave 1, but this was not the case. Cohabitation status was not associated with whether women had been currently physically abused or, for those who were abused, with the amount of abuse they experienced. Four currently abused women were living with a partner and 47 were not, a nonsignificant difference ( $\chi^2(4, N = 795) = .014, ns$ ). Among abused women, those cohabiting did experience more abuse ( $M = 2.75, SD = 1.71$ ) than women who were not in relationships or not living with their partners ( $M = 1.96, SD = 1.25$ ), but the difference was not significant ( $F_{1,49} = 1.41, ns$ ). However, these results could have been influenced by the small number of women in the cohabitation group compared to those in the non-cohabitation group.

*Exhibit A-2. Prevalence of intimate partner violence as assessed by three studies*

Study	Indices	Questions included	Prevalence (in percentages)	
			Lifetime	Past 12 months
IFS	3-item MMS index of severe physical violence	1. Hit, slapped or kicked you?	21.4	3.8
		2. thrown or shoved you onto the floor or down stairs?	12.1	2.7
		3. Hurt you badly enough that you went to a doctor or clinic?	9.2	1.5
		3-item index	22.3	1.2
	6-item MMS index of physical and sexual violence	1. Hit, slapped or kicked you?	21.4	3.8
		2. Thrown or shoved you onto the floor, against a wall, or down stairs?	12.1	2.7
		3. Hurt you badly enough that you went to a doctor or clinic?	9.2	1.5
		4. Made you think that he might be going to hurt you?	16.2	3.6
		5. Used a gun, knife, or other object in a way that made you afraid?	6.6	0.9
		6. Forced you to have sex or engage in sexual activity against your will?	4.7	0.7
		6-item index	24.4	5.6
	9-item MMS index of physical, sexual and psychological violence	1. Hit, slapped or kicked you?	21.4	3.8
		2. Thrown or shoved you onto the floor, against a wall, or down stairs?	12.1	2.7
		3. Hurt you badly enough that you went to a doctor or clinic?	9.2	1.5
		4. Made you think that he might be going to hurt you?	16.2	3.6
5. Destroyed or taken your possessions or things of value to you?		12.4	2.0	
6. Tried to keep you from seeing or talking to friends or family?		10.1	2.0	
7. Used a gun, knife, or other object in a way that made you afraid?		6.6	0.9	
8. Consistently told you that you were worthless or called you names in order to make you feel bad about yourself?		14.3	3.9	
9. Forced you to have sex or engage in sexual activity against your will?		4.7	0.7	
	9-item index	26.8	6.6	
MMS	3-item index of severe physical violence	1. Hit, slapped or kicked you?	53.2	11.4
		2. thrown or shoved you onto the floor or down stairs?	47.1	10.7
		3. Hurt you badly enough that you went to a doctor or clinic?	21.1	3.5
		3-item index	57.6	13.8
	6-item index of physical and sexual violence	1. Hit, slapped or kicked you?	53.2	14.5
		2. Thrown or shoved you onto the floor, against a wall, or down stairs?	47.1	10.7
		3. Hurt you badly enough that you went to a doctor or clinic?	21.1	3.5
		4. Made you think that he might be going to hurt you?	45.6	14.5
		5. Used a gun, knife, or other object in a way that made you afraid?	25.7	4.3
		6. Forced you to have sex or engage in sexual activity against your will?	28.2	3.9
	6-item index	64.9	19.5	

Study	Indices	Questions included	Prevalence (in percentages)	
			Lifetime	Past 12 months
WES	9-item index of physical, sexual and emotional violence	1. Hit, slapped or kicked you?	53.2	14.5
		2. Thrown or shoved you onto the floor, against a wall, or down stairs?	47.1	10.7
		3. Hurt you badly enough that you went to a doctor or clinic?	21.1	3.5
		4. Made you think that you might be hurt by him?	45.6	14.5
		5. Destroyed or taken your possessions or things of value to you?	40.1	9.2
		6. Tried to keep you from seeing friends or family?	39.7	9.0
		7. Used a gun, knife, or other object in a way that made you afraid?	25.7	4.3
		8. Consistently told you that you were worthless or called you names in order to make you feel bad about yourself?	52.7	15.3
		9. Forced you to have sex or engage in sexual activity against your will?	28.2	3.9
		9-item index	70.3	26.0
	5-item threat index	1. Threatened to take your children away	27.5	11.7
		2. Threatened to turn you in to Child Protective Services	12.1	5.3
		3. Threatened to hit you with a fist	55.0	15.0
		4. Threatened to harm or harmed your family and friends	20.7	6.6
		5. Threw anything at you that could hurt you	31.5	7.8
		5-item index	61.4	24.0
	2-item physical violence index	1. Slapped, kicked or bit you?	34.0	8.8
		2. Pushed, grabbed or shoved you?	55.4	20.1
		2-item index	62.8	23.2
	6-item severe physical violence index	1. Hit you with his fist	31.3	7.8
		2. Hit you with an object that could hurt you	25.4	5.8
		3. Beat you	28.6	5.4
		4. Choked you	31.5	6.4
5. Threatened to or used a weapon		25.8	7.0	
6. Forced you into any sexual activity against your will		19.3	2.1	
	6-item index	51.0	14.9	
2-item work interference index	1. Stayed home from work or school because of something partner did	23.2	5.6	
	2. Harassed you at work, training, or school or interfered with attempts to go to work, training or school	22.8	7.3	
	2-item index	31.9	9.8	



## Collecting Data on Intimate Partner Violence

### Differences in the Reporting of Intimate Partner Violence as a Function of Introduction of Intimate Partner Violence Items

The IFS, WES, and MMS used face-to-face or telephone interviews as the primary mode of data collection. Before asking questions about IPV, interviewers provided the participants with a general introduction to the questions about IPV to the participants. These statements differed in each of the three studies (see Exhibit 1). The WES introduction was brief and placed the importance of collecting IPV data on the effect the IPV has on employment, which may have eased any anxiety or shame about discussing IPV. In the MMS, the introduction of IPV items was longer, and included a statement alerting the participant to the fact that the next set of questions may feel personal. There was no mention of IPV. The rest of the introduction consisted of instructions about completing the questions using audiotape and an answer sheet. The IFS introduction to the IPV questions appears to have been more comprehensive than the WES and MMS. Participants were told that the questions about to be asked were about their relationships, which included different partners such as current versus former spouses, boy/girlfriends, or partners. They were also told that some of the questions might feel personal, and that the questions were being asked to better understand how relationships can have an affect on people in good and bad ways. Participants were reminded that their answers were confidential and that they did not have to answer questions that made them feel uncomfortable or did not apply to them.

Each of the studies used short stems to the IPV items. These stems functioned as prompts or introductions that provided the participant with a reference point when considering the question and their response (see Exhibit 1). For example, the IFS introduced the IPV items with “Has any current or former spouse or partner ever...”, and a similar stem was used for abuse that occurred in the previous 12 months. Across the three studies, the short stems for each of the IPV questions were generally comparable, but there were some differences between stems. The IFS and MMS short stems explicitly mentioned current or former partners. However, the WES short stem could be considered somewhat ambiguous in that it did not include former partners in the short stem to the IPV items, stating “Has a husband or partner ever...” (the long stem included former partners). It is a subtle distinction, but participants could have interpreted this to mean “has a current husband or partner ever...”. The wording could have implied that past partners were not to be included when considering their answer. Finally, in terms of the gender of the abusive partner, the MMS stem restricted the gender of the abusive partner to male by specifying husband or boyfriend. The IFS and WES used labels such as husband, spouse, or partner, leaving the possibility open for same-sex relationships. Differences such as these may have had an impact on participant comfort level and willingness to answer the IPV questions across and within each of the studies.

### Differences in Reporting of Intimate Partner Violence as a Function of Survey Administration Mode

- **Answering questions about intimate partner violence on a written self-report measure rather than during an interview increases reporting of both the presence and the amount of intimate partner violence.**

The format or mode of administration of the IPV questions may affect reported rates of IPV. Some studies have shown that women are hesitant to report intimate partner violence to interviewer and that reported prevalence is higher when women complete a self-report measure. To compensate for this possibility, the MMS audiotaped the intimate partner violence questionnaire. Participants listened to the questions on audiotape, responded on a written questionnaire, and sealed their responses in an envelope.

For the IFS study, the mode of administration of IPV items varied across the waves. At Wave 1, the questions were asked in the usual manner: interviewers orally posed the questions and participants

responded orally. Interviewers then wrote down the participant's answers. At Wave 2, participants were randomly assigned to one of two administration modes: the traditional interview mode used at Wave 1 or a self-report mode. After completing the interview, women assigned to the self-report group privately completed written questionnaires about their experiences of IPV. Women in the interview group responded orally to interviewer questions about abuse as they had at Wave 1. At Wave 3, almost all women completed written questionnaires.

Using the Wave 2 sample, we tested whether women who responded via written questionnaires to intimate partner violence items reported more violence than women who responded orally to interviewer questioning. We used the 8 common items and an inclusive 21-item measure of physical, sexual and psychological violence for these analyses, testing for differences in reporting of both the presence (using dichotomous variables) and amount (using continuous variables) of intimate partner violence. Results shown in Exhibit A-3 suggest that relative privacy increases reporting of both the presence and amount of intimate partner violence.

### *Exhibit A-3. Differences in reporting of abuse as a function of survey administration mode*

Recent intimate partner violence at Wave 2	Self-report mode		Interview mode		T-Test results
	M	SD	M	SD	
Presence of IPV					
8 common items measure (range of 0 to 1)	.13	.33	.08	.27	T (1050) = 2.32*
21-item measure (range of 0 to 1)	.15	.36	.10	.30	T (1050) = 2.36*
Amount of IPV					
8 common items measure (range of 0 to 8)	1.21	3.83	.60	2.34	T (1050) = 3.21*
Continuous 21-item measure (range of 0 to 21)	1.02	3.34	.73	2.44	T (1050) = 3.18*

\*  $p < .05$

Note: Self-report mode  $n = 576$ , interview mode  $n = 543$

## **Intimate Partner Violence Measurement and Employment Stability**

The following set of analyses investigates whether it is better to conceptualize IPV as a total score on a measure of intimate partner violence or in terms of the type of violence experienced (i.e., physical, psychological). We also examine how well these different methods for operationalizing IPV predict employment stability for low-income women.

As mentioned previously, between Wave 2 and Wave 3 the measure for IPV was changed from the 19-item measure used in the Massachusetts Mother Survey (MMS) to the 15-item measure from the Women's Employment Study (WES). Therefore, two sets of analyses were performed using different groupings of IPV items from these measures. The first grouping of items included eight items that were common between the MMS and WES. These eight items were used in all three waves of data collection (see Exhibit A-4). A total score was calculated for each participant on the common eight items, and also for the 3-item physical abuse and 5-item psychological abuse subscales derived from the eight items.

*Exhibit A-4. Common eight items from the MMS and WES*

Item	Type of Abuse
Hit, slapped, or kicked you	Physical
Forced you to have sex	Physical
Physically hurt you in front of your children	Physical
Tried to stop you from seeing your friends or family	Psychological
Used a gun or knife in a way that made you afraid	Psychological
Told you that you were worthless or called you names	Psychological
Made you feel like you were programmed to react	Psychological
Made you feel unsafe in your own home	Psychological

The second grouping used physical, psychological, sexual, and threat of abuse items from the MMS and WES (see Exhibit A-5). The MMS was used for Wave 1 and Wave 2, and the WES for Wave 3. The items from the MMS and WES do not necessarily map onto one another word-for-word; however, similarly worded items from both measures tap into the aforementioned types of abuse. As with the common eight items, a total score was derived for the MMS and WES. Subscales were also created for physical abuse (MMS = 5 items; WES = 8 items) and psychological abuse (MMS = 14 items; WES = 7 items). Scores on the physical and psychological subscales were then calculated for each participant. Because the WES has fewer items than the MMS, there is not an exact match in terms of the number of items in the physical and psychological subscales.

*Exhibit A-5. MMS and WES physical and psychological items*

Type of Abuse	Intimate Partner Violence Measure	
	MMS	WES
Physical	Hit, slapped, or kicked you	Hit, slapped, or kicked you
	Thrown or shoved you onto the floor, against a wall, or down stairs	Pushed, grabbed, shoved you
	Hurt you bad enough to go to doctor or clinic	Hit you with a fist
	Physically hurt you in front of your children	Hit you with an object that could hurt
	Forced you to have sex	Beat you
		Choked you
Psychological		Forced you to have sex
		Hurt you in front of your children
	Thought he might be trying to hurt you	Used gun/knife that made you afraid
	Destroyed or taken your possessions	Made you feel unsafe in home
	Tried to stop you from seeing family	Made feel programmed to react
	Used gun knife that made you afraid	Made you scared without touching you
	Told you are worthless and called you names	Harassed you at home
	Felt you couldn't rock the boat	Called you names
	Felt you were programmed to react	Tried to stop you from seeing family
	Tried to control your every move	
	Threatened to hurt your children	
	Actually hurt your children	
	Threatened to take your children	
Actually had DCFS take your children		
Yelled or screamed at you in front of your children		
Felt unsafe even in your own home		

## How well do the common eight items predict employment stability?

- **A comparison of the predictive ability of the common eight items and their physical and psychological abuse subscales revealed that a scale composed of the common eight items was a better predictor than either of its physical and psychological abuse subscales (see Exhibit 5).**

Regression analyses were conducted to determine how well total scores on the common eight items compared to the MMS and WES predicted employment stability within each wave as well as across waves. Follow-up analyses examined the extent to which the psychological and physical abuse subscales predicted employment stability within and across waves.

Results in Exhibit A-6 show that the Wave 1 common eight items scale predicted employment stability at Wave 1 ( $F_{1, 1273} = 2.41, p = .03$ ), and at Wave 2 ( $F_{1, 1013} = 2.70, p = .01$ ) but not at Wave 3. The Wave 2 common eight items scale predicted employment stability at Wave 2 but not Wave 3. The common eight items scale at Wave 3 predicted employment stability at Wave 3 ( $F_{1, 943} = 4.57, p = .03$ ). In sum, the common eight items scale was able to predict employment stability for the past year within each of the waves. Over time, the common eight items scale had less consistent predictive ability. Items measured at Wave 1 successfully predicted employment stability at Wave 2, but items measured at Wave 2 did not predict employment stability at Wave 3.

When we examined the subscales derived from the common eight items, we find less predictive success. Only the physical abuse subscale was a predictor of employment stability, and at only two times: Wave 1 physical abuse predicted employment stability at Wave 2 ( $F_{1, 1018} = 2.70, p = .05$ ), and Wave 2 physical abuse predicted employment stability at Wave 2 ( $F_{1, 1018} = 5.48, p = .001$ ).

### *Exhibit A-6. Employment stability as predicted by the common eight items*

Intimate Partner Violence Items	Employment Stability	Result
Wave 1 Common Eight	Wave 1	Significant
Physical	Wave 1	n.s.
Psychological	Wave 1	n.s.
Wave 1 Common Eight	Wave 2	Significant
Physical	Wave 2	Significant
Psychological	Wave 2	n.s.
Wave 1 Common Eight	Wave 3	n.s.
Physical	Wave 3	n.s.
Psychological	Wave 3	Significant
Wave 2 Common Eight	Wave 2	Significant
Physical	Wave 2	Significant
Psychological	Wave 2	n.s.
Wave 2 Common Eight	Wave 3	n.s.
Physical	Wave 3	n.s.
Psychological	Wave 3	n.s.
Wave 3 Common Eight	Wave 3	Significant
Physical	Wave 3	n.s.
Psychological	Wave 3	n.s.

### How well do the MMS and WES predict employment stability?

- **The MMS and WES scales did not consistently predict employment stability within or across waves, nor did the physical and psychological abuse subscales (see Exhibit 6).**
- **The pattern of results for employment stability within and across the three waves suggests potential differences in predictive ability between the common eight items, MMS, and WES.** While the common eight items seemed to predict employment stability better than the MMS and WES, further research is need to determine whether IPV is best conceptualized as a total score on the IPV measure (common eight items, MMS, or WES) or by type of abuse (physical or psychological).

In terms of employment stability at Wave 1, the MMS physical abuse subscale was the only predictor ( $F_{1, 276} = 2.32, p = .04$ ). However, the Wave 1 total MMS predicted employment stability at Wave 3 ( $F_{1, 371} = 3.85, p = .05$ ), and the Wave 1 MMS physical abuse ( $F_{1, 232} = 2.64, p = .02$ ) and psychological ( $F_{1, 249} = 1.97, p = .04$ ) subscales predicted employment stability at Wave 2. Wave 2 employment stability was predicted by Wave 2 total MMS ( $F_{1, 1008} = 2.32, p = .001$ ). At Wave 3, both the total WES ( $F_{1, 940} = 5.78, p = .02$ ) and psychological subscale ( $F_{1, 939} = 6.91, p = .01$ ) predicted employment stability. Results appear in Exhibit A-7.

*Exhibit A-7. Employment stability as predicted by the MMS and WES*

Intimate Partner Violence Items	Employment Stability	Result
Wave 1 MMS	Wave 1	n.s.
MMS Physical	Wave 1	Significant
MMS Psychological	Wave 1	n.s.
Wave 1 MMS	Wave 2	n.s.
MMS Physical	Wave 2	Significant
MMS Psychological	Wave 2	Significant
Wave 1 MMS	Wave 3	Significant
MMS Physical	Wave 3	n.s.
MMS Psychological	Wave 3	n.s.
Wave 2 MMS	Wave 2	Significant
MMS Physical	Wave 2	n.s.
MMS Psychological	Wave 2	n.s.
Wave 2 MMS	Wave 3	n.s.
MMS Physical	Wave 3	n.s.
MMS Psychological	Wave 3	n.s.
Wave 3 WES	Wave 3	Significant
WES Physical	Wave 3	n.s.
WES Psychological	Wave 3	Significant

## Discussion

In this chapter, we examined the measurement and data collection methods and IPV rates of the IFS, MMS, and WES. Lifetime and past 12-month rates of IPV reported in the IFS were lower than those reported in the MMS and WES. These differences may be due to the effects of few women living with their partners or the method of introduction of IPV items in the questionnaire. The mode of administration for the IPV items may have also influenced the rates of IPV, as we found that women disclosed more abuse when answering the questions anonymously in Wave 2.

We also explored whether the items measured in a particular wave could be used to predict employment stability in that same or another wave. The results suggest that the common eight items scale was a better predictor of employment stability than the physical and psychological subscales developed from those items. Furthermore, it appears that operationalizing the IPV data collected in Wave 1 using the common eight items may have been an effective predictor of employment stability. The disparity in number of items between the physical and psychological abuse subscales could have been a factor in predictive ability.

When comparing the MMS and WES, it appears that the WES may be a better predictor of employment stability than the MMS. The WES total score and psychological abuse subscale (comprising the majority of items from the WES) were both predictive of employment stability at Wave 3. It is interesting that in some waves, the total MMS was predictive, but in other waves only the subscales were the only predictors of employment stability. It is possible that the common eight items in Wave 1 may be better predictors of employment stability at Wave 1 than the MMS.

Moreover, it is conceivable that this trend might continue across waves. It is unfortunate that there was a change in measurement, as this compromises our ability to compare measures across waves for

predictive capacity. A curious finding was that both MMS subscales in Wave 1 predicted employment stability at Wave 2, but the Wave 1 MMS total score did not. Data from Wave 4 is required to further explore these issues.

The total scores and subscale scores from Waves 1 and 2, albeit sporadically, predicted employment stability within and across waves, including Wave 3. However, it is interesting that neither the total scores nor subscales from common eight items or the MMS at Wave 2 were able to predict employment stability at Wave 3. This may be a result of measurement modifications, a decline in IPV rates across waves, or other contextual variables not captured in the survey.

When interpreting the results, there are several issues to keep in mind. The eight items that were common to the MMS and WES were selected based on similarity of items between the two measures rather than on a theoretical basis. The measurement change and administration mode may have had an effect on either overestimating or underestimating the IPV rate. Another issue is the unequal distribution of items in the physical and psychological subscales, which has implications for the stability of the subscale as well as for comparing the ability of the two subscales to predict employment stability. Furthermore, the measures used were not comprehensive measures of IPV with reliable or valid subscale measures of the major types of violence (e.g., physical, sexual, psychological). For example, the MMS and WES assessed sexual assault with one question. Because one item does not constitute a subscale, this item was included in the physical abuse subscale. However, generally speaking, sexual abuse is considered a type of abuse that has separate characteristics from physical abuse and is commonly assessed with multiple items.

## Appendix B: Description of Studies of Intimate Partner Violence and Welfare Reform

*Exhibit B-1. Descriptions of studies of intimate partner violence and welfare reform*

Study (if named)	Authors	Sample/Response Rate	Race/Ethnicity	Response Rate	Time Period	Data Sources	Welfare Status
Welfare, Children and Families: The Three-City Study	Bell (2003); Moffit & Cherlin (2002); Votruba-Drzal et al. (2002)	3,650 low-income families in Boston, MA., Chicago, IL., and San Antonio, TX.	41% African-American, 53% Hispanic, and 6% Other	Wave 1 – 74%; Wave 2 – 88%	1999 and 2001	National data, participant observation, in-person semi-structured and ethnographic interviews, computer-aided self-interviews	Past and current recipients
	Brush (2000, 2003)	Over 100 job readiness program enrollees in Pennsylvania	2000: 84% African-American, 16% White; 2001: 75% African-American, 25% White	100%	1998 and 2001	In-person structured interviews, program administrative data	Current recipients



Study (if named)	Authors	Sample/Response Rate	Race/Ethnicity	Response Rate	Time Period	Data Sources	Welfare Status
The Women's Employment Study (WES)	Danziger & Seefeldt (2002); Danziger et al. (2000); Tolman, Danziger, & Rosen (2002)	753 single mothers in an urban Michigan county	56% African-American, 44% White	86% - Wave 1, 93% - Wave 2, 91% - Wave 3	1997-1999	In-person structured interviews, national data	Recipients at sampling
	Edin (2000)	292 low-income mothers in Charleston, NC, Chicago, IL, and Camden, NJ.	About 50% African-American, 50% White	90%	1989-1992	In-person unstructured interviews	50% current recipients
The Evaluation of Welfare Reform in Iowa	Fraker et al. (2002)	2951 families in Iowa randomly assigned to welfare reform policy treatment or AFDC policy control group.	18% African-American, 3% Hispanic or Other, 79% White	72% - Wave 1; 87% - Wave 2; 91% - Wave 3	1998-1999	Telephone interviews, state administrative data	Recipients or applicants
Minnesota Family Investment Program	Gennetian & Miller (2002); Gennetian (2003)	Subsamples from a sample of 2131 families in urban Minnesota counties randomly assigned to one of three conditions: 2 experimental welfare reform programs – one the full program and another an incentive-only program - and one control group	Subsample: 32% African-American, 2% Asian-American, 2% Hispanic, 9% Native American or Alaskan native, 56% White	80%	1994-1997	In-person structured interviews, computer-aided self-interviews, state administrative records	Current or past recipients
The Next Generation Project	Gibson et al. (2003)	Minnesota Family Investment Program (MFIP) and National Evaluation of Welfare-to-Work Strategies (NEWWS) samples; women were randomly assigned to program or control groups.	MFIP subsample - 32% African-American, 2% Asian-American, 2% Hispanic, 9% Native American or Alaskan native,	MFIP – 80% NEWWS – over 70%	Various periods throughout the 1990's	In-person structured interviews, state and program administrative records	MFIP – past recipients NEWWS – recipients at sampling

Study (if named)	Authors	Sample/Response Rate	Race/Ethnicity	Response Rate	Time Period	Data Sources	Welfare Status
		MFIP – 862 single mothers in urban Minnesota counties NEWWS – 1,957 single mothers in Georgia, Michigan and California	56% White  NEWWS - All sample members in two sites were African American. Half the sample members in four sites were White.				
Federal Office of Child Support Enforcement Grantee Study	Griswold, Pearson, & Thoennes (2000)	Demonstration and evaluation projects in Colorado, Minnesota and Massachusetts – CO: 1,082 interview by public assistance workers of welfare applicants, 433 interviews by child support workers with child support seekers who disclosed violence; Massachusetts – exit interviews with 493 women; Massachusetts – interviews with over 2,000 applicants for child support by child support workers, and exit interviews by researchers with a subsample of 400 of those women	Not reported	Not reported	1997-2000	In-person interviews, state administrative records, focus groups	Many applicants
The National Evaluation of Welfare-to-Work Strategies (NEWWS)	Hamilton (2002); Hamilton et al. (2001)	National sample of 40,000 families in 11 welfare-to-work programs at 7 sites (CA, GA, OH, OK, OR, MI: 2 sites) that took different approaches to welfare reform. Each family was randomly assigned to a treatment group (some sites had two treatment groups) or a control group. 5,408 families were interviewed in the main	All sample members in two sites were African American. Half the sample members in four sites were White. Two-thirds of the sample in one site was White, and one-third of the sample in one site	Over 70%	5-year periods throughout the 1990's	In-person interviews, self-administered questionnaires, program and state administrative records	Recipients at sampling

Study (if named)	Authors	Sample/Response Rate	Race/Ethnicity	Response Rate	Time Period	Data Sources	Welfare Status
		survey.	was Hispanic.				
Domestic Violence and Welfare Receipt in Maryland	Hetling-Wernyj & Born (2002)	4,335 female welfare recipients in Maryland in four groups: Women identified as victims of domestic violence in a state computer system who had FVO waivers (n = 261), identified victims who did not have FVO waivers (n=293), women who were not officially marked as victims in the computer system but whose case narratives suggested they were victims (n = 184) and a statewide representative sample of women who did not appear to be victims of domestic violence (n = 3,597)	69% African-American, 2% Other, 4% Unknown, 25% White	N/A	1998 – 2000	State administrative records, interviews	Current or past recipients
Illinois Study of Welfare Leavers	Julnes, Fan, & Hayashi (2001)	Statewide sample of 514 welfare leavers in 33 Illinois counties	Not reported	51%	1998	Telephone interview, state administrative records	Past recipients
The Calworks Project	Meisel, Chandler, & Menees Rienzi (2003)	Random sample of 646 women on TANF in 2 California counties	Kern county: 22% African-American, 40% Hispanic, 6% Other, 31% White  Stanislaus county: 10% African-American, 34% Hispanic, 8% Other, 48% White	Stanislaus: 71%; Kern: 55%	1999-2000	In-person structured interviews	Kern county participants were past recipients; Stanislaus county participants were new applicants
Institute for Wisconsin's Future (IWF) –	Moore & Selkove (1999)	274 current victims of DV seeking help at shelters in Wisconsin who had been or	Not reported	Not reported	1998	interviews	Past and current recipients

Study (if named)	Authors	Sample/Response Rate	Race/Ethnicity	Response Rate	Time Period	Data Sources	Welfare Status
Domestic Violence Project		were receiving either AFDC or the post-welfare reform program, W-2					
The Urban Chance Project	Polit et al. (2001); Scott, London, & Myers (2002)	3,960 randomly selected women receiving public assistance in 1995 in low-income urban census tracts in Cleveland, Los Angeles, Miami and Philadelphia	69% African-American, 24% Hispanic, 7% White	79%	1998-2000	In-person structured and unstructured interviews, administrative records, neighborhood social and economic statistical indicators	Recipients at sampling
The Illinois Families Study	Riger, Staggs, & Schewe (under review)	Statewide representative sample of 1311 women on welfare in Illinois	81% African American, 6% Other minority, 13% White	Wave 1 - 72%; Wave 2 - 87%; Wave 3 - 91%	1999-2002	Three in-person interviews at one-year intervals	Recipients at sampling
National Survey of Families and Households	Rodriguez et al. (2001)	National sample of 4780 married or cohabitating couples	11% African-American, 8% Other, 81% White	Not reported	1987 and 1992	Interview	Some current recipients
	Romero et al. (2002, 2003)	504 low-income mothers in San Antonio, TX. with chronically ill children	22% African-American, 62% Hispanic, 5% Other, 11% White	Not reported	1999	In-person interview	Non-recipients, past recipients, current recipients, applicants
Alameda County Calworks	Speiglman, Fujiwara, Norris, &	512 randomly selected participants (91% female) in Alameda county, CA	55% African-American, 13% Asian, 10%	71.7%	1998	Telephone and in-person interviews, state	Recipients at sampling

Study (if named)	Authors	Sample/Response Rate	Race/Ethnicity	Response Rate	Time Period	Data Sources	Welfare Status
Needs Assessment	Greene (1999)		Hispanic, 2% Mixed, 3% Native American, 1% Native Hawaiian/Pacific Islander, 13% White			administrative data	
Utah Department of Workforce Services Project	Taylor, Barusch, & Vogel (2000)	407 long-term welfare recipients (95% female) in Utah whose cases had been closed in past two months	4% African-American, 16% Hispanic, 8% Native American, 6% other, 66% White	73%	2000	In-person interview	Past recipients

## Appendix C: Prevalence of Abuse in Studies of Intimate Partner Violence and Welfare Reform

*Exhibit C-1. Prevalence of abuse as reported in studies of intimate partner violence and welfare reform*

Author	Domestic Violence Definition	Findings
Brandwein & Filipiano (2000)	Respondent's own definitions were used	All women had been severely physically abused by a partner.
Brush (2000)	Some items measured physical abuse by an intimate partner: hit, kicked or threw something; forced sex; cut, bruised, choked or seriously injured them; other items measured controlling behaviors such as verbal abuse and threatening statements about work, such as "working mothers are bad mothers"	18% to 32% reported current physical abuse, 6%-12% reported that their partners attempted to keep them from working, 21%-47% reported verbal abuse.
Byrne et al. (1999)	Sexual molestation, aggravated assault, rape or attempted rape by anyone prior to Wave 1, between Waves 1 and 2, and between Waves 2 and 3; divided women into: never victimized, past only (before Wave 1), and recent (after Wave 1)	31% had a past history of interpersonal assault. 6% had experienced sexual molestation, 13%-14% had experienced rape or attempted rape, and 11% had experienced aggravated assault.  5% were recently victims of an aggravated assault or rape.
Center for Impact Research (2000)	DV only in past 12 months by level: Level 1 – direct verbal and symbolic aggression; Level 2 – physically aggressive behaviors such as throwing objects; Level 3 – severely aggressive behaviors such as beating; also measured work/school interference with items such as "promised to babysit or drive to school or work and hasn't shown up, tore up books or schoolwork"	55% had experienced IPV past 12 months; 41% had experienced severe aggression. Women with partners who had less than a HS education were more likely to experience severe abuse.

Author	Domestic Violence Definition	Findings
Chandler, Meisel, & Jordan (2002, 2003); Meisel, Chandler, & Menees Rienzi (2003)	Domestic violence was defined as any physical or emotional abuse, stalking, serious threats, or work interferences. Physical abuse was measured with the Conflict Tactics Scale. A serious condition was defined as physical injury, being choked or beaten up, stalking, threats to kill the woman or himself or kidnap the children or call CPS, preventing the woman from working or harassing her at work. A woman was defined as needing DV services if she had a serious condition, had used DV services, had a partner who interfered with her working, or was suffering from abuse-related PTSD.	16% had been physically or sexually abused as a child and reported that abuse was worse than any they had experienced in adulthood.  54% of women surveyed had a need for dv services at some point during three years, but only 8% needed services in all three years.  In the past year, 21.9% needed or got dv services; 35.1% experienced dv; 16.1% experienced at least one type of physical abuse; 17.8% experienced serious abuse.
Cunradi (2002)	11 items revised from the Conflict Tactics Scale, separate variables were created for male-to-female and female-to-male violence	
Danziger (2000)	Modified Conflict Tactics Scale – abuse defined as severe violence from partner within past year	Overall prevalence of recent dv was 6.1%.
Danziger & Seefeldt (2002)	Using items adapted from the conflict tactics scale, researchers grouped women as follows: no DV, DV before Wave 1 only, recent DV in one year, recent DV in two years, recent DV in all three years	Of the women working 75% of the time in the past three years, 54% had experienced abuse at some point in their lives. For the women receiving TANF 75% of the time in past three years, lifetime prevalence was 66%.  Women working 75% of the time in past three years: 27% - severe DV before the study; 20% - severe dv in one year; 6% - severe dv in two years; 1% - severe dv in all three year  Women on welfare 75% of the time in past three years: 28% - severe DV before the study; 24% - severe dv in one year; 12% - severe dv in two years; 2% - severe dv in all three years
Danziger et al. (2000)	Items adapted from Conflict Tactics Scale. Researchers defined women as having a domestic violence obstacle to employment if within the past year they had experienced severe physical abuse (being hit with a fist or object, beaten, choked, threatened with a weapon or forced into sexual activity against her will)	15% of sample reported recent physical IPV in past year. No difference in prevalence of DV between African-American and white participants.

Author	Domestic Violence Definition	Findings
Fraker et al. (2002)	Verbal abuse and physical abuse	Recent verbal abuse experienced by 75-85% of sample, physical abuse by 43-54%. 13.1% of treatment experienced DV in past year compared with 8% of controls. A similar pattern emerged for verbal abuse.
Gennetian & Miller (2002)	Asked whether women had ever experienced hitting, yelling, feeling controlled, sexual abuse or threats in last three years.	49%-60% had been abused at some point in the past three years.
Gibson et al. (2003)	Women were asked if they had experienced five types of abusive events, who perpetrated those events and whether they happened in the past year: emotional/mental abuse, physical abuse, forced sexual activities, partner abuse, abuse by a non-partner	Recent victimization: Physical abuse - MFIP 13%, NEWWS 10%; Emotional abuse – MFIP 38%, NEWWS 20%, Asked in MFIP only - Sexual abuse 3%, partner abuse MFIP 28% NEWWS 15%, abuse by others MFIP 26% NEWWS 7%.
Griswold, Pearson, & Thoennes (2000); Pearson, Griswold & Thoennes (2001); Pearson, Thoennes, & Griswold (1999)	Been in a current or past relationship where they were physically, sexually or emotionally abused. If respondents answered yes, they were asked whether the abuser was the father of their children. If so, women were asked a series of question to measure the extent and severity of physical abuse, threats, and controlling actions.	Lifetime prevalence: CO: 40% ; MA: 35%; MI: 38%  Abuser father of children: CO: 75%; MA: 57%  35-45% of respondents answered yes when directly questioned about dv, but only 10% disclosed when less direct methods, such as brochures, were used. Women preferred to be asked directly by welfare workers about personal issues.  40% reported past or current abuse. 2% by current partner, 74% by past partner, 24% by current and past partners, 75% abuser is father of child, 45% afraid of abuser who is father of child;  Of women whose abuser fathered one of their children: 81% hit or beaten, 71% called police, 45% got restraining order, 27% violated restraining order, 44% prevented from working, 58% isolated from children, 65% destroyed possessions, 59% monitored calls/activities, 76% accused of being unfaithful, 39% 39% forced to have sex, 31% threatened suicide, 91% called her worthless, 69% threatened to harm/kill her, 16% threatened to harm children, 38% threatened to take children, 65% followed her when she tried to leave, 57% frightened her with drinking/drug use, 34% threatened with weapon.



Author	Domestic Violence Definition	Findings
Hamilton (2002); Hamilton et al. (2001)	Measured physical and nonphysical abuse and work interference	The rates at which people reported having experienced physical abuse during the last year of the study ranged from 19 percent to 22 percent among control group members; the programs decreased these rates by 3 to 6 percentage points.
Julnes, Fan, & Hayashi (2001)	Asked participants whether in the past year their spouse interfered with attempts to work, refused to help with child care, made it difficult to attend or complete job training programs, harassed with phone calls, injured, caused to lose or quit job, caused to go to a shelter	
Kalil & Danziger (2000)	modified CTS, five-item index of physical violence in lifetime – threatened with harmful object, physically assaulted, choked or beaten up, threatened or assaulted with weapon, forced into sexual activity.  Summed number of yes answers to five-item index.	57% of teens had ever experienced dv. 33% had experienced more than one incident.
Libbus, Sable, Huneke, & Anger (1999)	Violence from an intimate partner	
Martinez (2000)	Abuse or violence by someone close: threatened with physical harm, hit, slapped, kicked or physically harmed, abused physically, emotionally or sexually	13% any recent dv, 9% abused physically, emotionally or sexually, 5% abused physically, 7% threatened with physical harm.
Moffit & Cherlin (2002)	8 items that measured victimization ranging from threats to physical violence administered through a computer.	70% of those currently on TANF had experienced domestic violence at some point in their lives. Sixty-five percent of women who had left TANF had ever experienced dv, and 51% of those who were never on TANF had ever experienced it. Of the women who were employed and receiving TANF, 77% had ever experienced dv, whereas 68% of unemployed women receiving TANF had ever experienced it.

Author	Domestic Violence Definition	Findings
Moore & Selkove (1999)	16 questions about specific behaviors, including work or school-related abuse	29.6% fired or quit job because of abuse, 35% abuse hurt education/training efforts. Specific interference behaviors included: kept her from sleeping 84%, repeated phone calls at work 41.5% , threatened to the point they could not attend work/school 57.8%, 33.9% beaten so could not work, abuser refused to give child care at last minute 47.1%, refused to provide transportation at last minute 34%.
Ng (1999)		39% of Mexican and 16% of Vietnamese women have experienced dv.
Polit et al. (2001)	Women grouped as: Physically abused in past 12 months, threatened with abuse in past 12 months, abused or threatened in past 12 months.	Of those who reported working in the past 2 years, 6.8% were physically abused and 10.8% were threatened. 12.9% were abused or threatened in the past year.
Quint, Bos, & Polit (1997)	Reports of abuse from welfare program staff.	Program staff knew that 10%-20% of women in an early cohort of the experimental group were being abused.
Rickman & Foster (2001)		Single parent welfare case leavers: 6%, single parent stayers: 9%, child-only leavers: 3%, child-only stayers: 4%
Riger, Staggs, & Schewe (under review)	Questions adapted from the Massachusetts Mothers Study. Participants were asked if an intimate partner had “hit, slapped or kicked you, tried to stop you from seeing your friends or family, used a gun or knife in a way that made you afraid, told you that you were worthless or called you names, made you feel like you were programmed to react, physically hurt you in front of your children, forced you to have sex, or made you feel unsafe in your own home.”	23% had ever experienced dv. From 5% to 10% had experienced recent abuse at some point during the study.
Rodriguez et al. (2001)	Domestic violence was defined as reporting that both partners were physically violent during arguments.	3% of the entire sample engaged in violent arguments. Of those, 8% were working and receiving welfare and 25% were unemployed.
Romero et al. (2002; 2003)	Partner Violence Screen questionnaire, which is three brief screening questions administered in hospital emergency rooms	24% of the sample had experienced dv. Women who never applied for welfare had lower rates of DV (16.4%) than women who had experience with welfare (28.6-40%). Women who were working had less DV (27.4%) than women who were unemployed (18.7%).

Author	Domestic Violence Definition	Findings
Speiglmán, Fujiwara, Norris, & Greene (1999)	Modified CTS - Victimization by lover, girlfriend, boyfriend or spouse in past year, victimization by another family member in past year, every received dv services due to ipv, needed dv services past year, currently need dv services  Used indices of dv items to determine whether dv represented a potential obstacle to employment	In their lifetimes, the prevalence of emotional abuse was 32.4%, neglect was 30.7%, physical abuse was 26.4% and forced sex was 22.1%.  9% experienced violence from someone other than an intimate partner in the past year; 7.8% reported IPV in past year, 3.5% needed dv services past year, 2.3% currently needed dv services. 10.9% had ever received dv services. Using a broad definition of family violence as a obstacle, 23% of women had this obstacle. Using a narrower definition, 17% had the obstacle.
Taylor, Barusch, & Vogel (2000)	Item adapted from WES and measured incidence of being hit with a fist, hit with an object, beaten, choked threatened or used a weapon against, and/or forced into sexual activity.	76% of the sample had been victims of dv at some time in their lives and 14% were recent victims.
Tolman, Danziger, & Rosen (2000)	Women were divided into four groups: never experienced severe violence, experienced it only in the past, experienced it only recently, and experienced it in the past and recently	4.4% had recent only, 11.1% had past and recent. 39.6% had past abuse only
Verma (2003)	Abuse or violence by someone close: threatened with physical harm; hit, slapped, kicked or physically harmed; abused physically, emotionally or sexually	Women who had moved since the baseline interview had a 45.5% prevalence of general threats, a 22.1% prevalence of threats of physical harm, and a 14.6% prevalence of physical, emotional or sexual abuse. Of the women who had not moved, 33% reported general threats, 15.1% reported threats of physical harm, and 9.4% reported being physically, emotionally or sexually abused.
Votruba-Drzal et al. (2002)	Using computer assisted survey, domestic violence was measured using a modified version of the Conflict Tactics Scale, and measured for four types of domestic violence: total, moderate (e.g., threats, pushes, slaps) , extreme (e.g., beaten, choked, weapon, sexual, threats to take away child) and work-related (interference, harassed, missed, lost job).  Recent – past year	Lifetime: 78% total, 75% moderate violence, 44% extreme, 34% work-related, 28-30%  Recent: total, 28-30%, moderate 25-27%, extreme 8-9%, work related 7-8%.

# Appendix D: Relationship of Abuse to Economic Status in Studies of Intimate Partner Violence and Welfare Reform

*Exhibit D-1. Relationship of abuse to economic status in selected studies of welfare recipients*

Author	Economic Self-Sufficiency or Welfare Program Definition	Findings
Bell (2003)	Women's own definitions were used.	Welfare cycling may be linked to the relationship status of women and their abusers, especially if those men are the fathers of their children. Women with children needed financial and emotional support from their abusers, who encouraged such dependency by thwarting women's attempts to become self-supporting.
Brush (2000)	Outcomes of a job readiness program: found a job within 20 program days, dropped out, or completed the program without finding a job	21% were threatened or harassed by an intimate partner at work. 46% felt their partner seemed jealous that they might meet someone at work. More women whose partners told them that good mothers did not work dropped out of a job placement program (40%) than found a job (13%). Women whose partners had hit, kicked or thrown something at them were more likely to find a job (26%) than drop out of the program (15%). Abused women were more likely to find jobs than other women, and abuse explained more program outcomes ( $R^2=.16$ ) than did character and human capital deficit factors ( $R^2=.04$ ).
Brush (2003)	Employment status, hourly wage of most recent job, number of weeks worked in the past year	Many women stated that physical abuse generally started or got worse when they were working, and most other women felt it stayed the same regardless of their work status. Very few women reported that physical abuse decreased when they were working. Over half said that work-related control or sabotage increased when they were working.

Author	Economic Self-Sufficiency or Welfare Program Definition	Findings
Danziger & Seefeldt (2002)	Employment stability	Although rates of employment were lower for those who were abused, there were no differences in employment among women who had experienced past or recent DV, even when they had experienced it in all three years of the study. However, women who were recently abused were more likely than other women to consistently depend on welfare. Women who faced fewer obstacles to employment over time were more likely to have stable employment than other women.
Danziger et al. (2000)	Employment status	Recent abuse did not differentiate those who worked at least 20 hours per week from those who did not.
Edin (2000)	Women's own definitions were used.	Women reported leaving relationships when the abuse began to affect their children, but would often get into another abusive relationship for financial reasons. Participants also stated that their partners would often become violent when they were scared they would not be able to provide for their families.
Fraker et al. (2002)	Income, number of hours worked, welfare program status	Welfare reform did not impact incidence of DV over time, but during the last year of the study, it increased incidence of physical abuse.
Gennetian (2003)	Average employment rate, average earnings three years after assignment into an experimental welfare reform program	The experimental welfare program decreased domestic violence in urban but not rural counties. The decrease was associated with financial incentives rather than participation requirements.
Gennetian & Miller (2002)	Average annual income	Physical and non-physical abuse by partners and others among women in an experimental welfare program decreased 18% when compared to a control group. Abuse among women in an incentives-only program decreased 16% when compared to the control group.
Gibson et al. (2003)	Employment status and stability	In general, increased employment decreased subsequent violence, but increased earnings and decreased welfare receipt did not decrease subsequent violence. Changes in employment outcomes had differential effects on violence depending on who the perpetrator was and whether the abuse was physical, sexual or emotional.
Griswold, Pearson, & Thoennes (2000)	Women's own definitions were used.	Relatively few women cited DV as a obstacle to self-sufficiency. They were more likely to cite lack of transportation. Many women who saw a DV advocate asked for assistance with housing. While most victims say there should be a DV advocate at the public agencies, few of the victims interviewed took advantage of advocacy services when they were available. A frequent reason for not seeking advocacy was that the issues were resolved or the DV happened in the past.

Author	Economic Self-Sufficiency or Welfare Program Definition	Findings
Hamilton (2002)	Employment status, welfare-to-work group status: experimental or control group	There were no treatment-control group differences in rates of nonphysical abuse or work interference. But participants in an experimental welfare program were less likely than control group members to have experienced physical abuse, although they were no less likely to have experienced other types of abuse, including work harassment. The NEWWS program decreased rates of physical abuse by 3% to 6%, but the authors also found evidence that those reductions were associated with increases in employment and so could not be solely attributed to program effects.
Hetling-Wernyj & Born (2002)	Employment status, income, number of different employers	In general, DV victims worked fewer quarters, made less money and had more employers than non-victims. Among victims, women who had an FVO waiver experienced the worst outcomes when compared to victims who did not have a waiver and women who were probable victims.
Julnes, Fan, & Hayashi (2001)	Employment status, monthly household income from any source, hourly rate of pay, welfare recidivism	Social support was associated with less abuse. DV indirectly affected employment and welfare recidivism by its negative impact on psychological health.
Meisel, Chandler, & Menees Rienzi (2003)	Employment status, mean yearly wages, mean hours/weeks worked, job loss	Physical, work-related and other serious abuse was negatively associated with number of hours worked per week. Need for DV services was associated with working fewer than 32 hours per week, having a lower yearly income, and losing a job. The effect of abuse on employment varies by county and by type of abuse over time, but adult trauma PTSD and need for DV services were the most consistently associated with employment outcomes.
Moffit & Cherlin (2002)	Employment and welfare status	Women who remained on welfare had slightly higher levels of DV than women who had left welfare. Women who were working and receiving welfare had higher rates of DV than women who were receiving welfare but not working.
Moore & Selkove (1999)	Employment status	29.6% were fired or quit a job because of abuse. 35% said that abuse hurt their education/training efforts. Specific interference behaviors included: kept from sleeping (84%), repeated phone calls at work (42%), threatened to the point where they could not attend work/school (58%), beaten so could not work (34%), abuser refused to give child care at last minute (47%), abuser refused to provide transportation at last minute (34%). The majority of currently abused women were unemployed. More past victims than current victims were employed, and that pattern held for all ages and education levels.

Author	Economic Self-Sufficiency or Welfare Program Definition	Findings
Polit et al. (2001); Scott, London, & Myers (2002)	Employment stability for those who were currently working	Quantitative analyses revealed an inverse linear relationship between employment stability and DV for abuse, threats and abuse/threat combinations. Women who left welfare for employment before they reached the TANF time limits were less likely to have been abused than women who were on welfare when they hit their time limits. Ethnographic data revealed that some women had to change their routines to escape abusive partners and ensure their safety. This may have included changing jobs or leaving a job. Women also relied on abusers for financial assistance during the welfare-to-work transition. Some women became involved in extremely dangerous relationships after they hit time limits.
Riger, Staggs, & Schewe (under review)	Employment stability	Recent but not past DV had a negative effect on employment stability over a three-year period after the effects of human capital and demographic factors were accounted for.
Rodriguez et al. (2001)	Employment and welfare status	Couples who were working and receiving welfare were four times as likely to report violence as those who were working but not receiving welfare. Unemployment itself did not increase the risk of violence when other factors were controlled, but working while receiving welfare benefits did increase the chances that women would report the violence. Alcohol use interacted with non-employment to predict violence but did not increase the risk of violence among other employment groups when compared to those who were employed full time.
Romero et al. (2002)	Employment and welfare status	Women who never applied for welfare had lower rates of DV (16.4%) than women who had experience with welfare (28.6-40%). Women who were working had less DV (27.4%) than women who were unemployed (18.7%).
Romero et al. (2003)	Employment and welfare status, monthly income	Victims were less likely to be employed, miss work, make less money and lose jobs than nonabused women.
Speigman, Fujiwara, Norris, & Greene (1999)	Employment status and existence of potential obstacles to employment	23% faced a potential obstacle to employment from past violence, and 17% faced a potential obstacle from current or recent violence.
Taylor, Barusch, & Vogel (2000)	Reason for welfare case closure – increased income, time limits, other reasons including sanctioning	Among women who left welfare, more women who left due to time limits (17%) than women who increased their income (8%) were DV victims. Increased income participants were half as likely other welfare leavers to experience DV.

Author	Economic Self-Sufficiency or Welfare Program Definition	Findings
Tolman, Danziger, & Rosen (2002)	Employment and welfare status, household income, personal income	Past-only victims do not differ from never abused victims on welfare/work status, but past and recent victims were almost twice as likely to be welfare reliant and half as likely to be wage reliant as those who had never been abused. Persistent (past and recent) abuse predicted work/welfare status. Women who experienced persistent violence had four times the odds of being welfare reliant than never-abused women, but past-only and recent-only violence did not predict work/welfare status. Persistent victims had lower household income than past-only victims but not when compared to women who had never been victimized. Recent-only victims had less household income than past-only and never-abused groups. Persistent and recent-only victims earned less money monthly than past and never groups. After controlling for demographic, health, human capital and other important variables, women with recent-only violence had lower household incomes than never victimized women. Past victims had higher incomes than those who never experienced abuse. Regarding monthly income, persistent victims made less money than never victimized women.
Votruba-Drzal et al. (2002)	Employment pattern: stably employed, not employed, moved into the labor force, moved out of labor force	There were no associations between employment stability and changes in levels of violence over time. Transitions into employment were not associated with DV. But transitions out of employment were associated with increases in total, moderate and work-related violence. Welfare-reliant women had increases in total, moderate and work-related DV compared to women who were not consistently on welfare. Moving off welfare was associated with decreased DV over time. Past abuse was associated with higher levels of total, moderate, extreme and work-related recent violence. As women aged, they reported reductions in rates of DV. Increases in education were associated with reductions in extreme and work-related violence.