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Unemployment Among Women

Examining the Relationship of Physical and Psychological Intimate Partner Violence and Posttraumatic Stress Disorder

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Prior research has demonstrated that intimate partner violence (IPV) is associated with employment instability among poor women. The current study assesses the broader relationship between IPV and women's workforce participation in a population-based sample of 6,698 California women. We examined past-year IPV by analyzing specific effects of physical violence, psychological violence, and posttraumatic stress disorder (PTSD) symptoms as predictors of unemployment. Results indicated substantial rates of unemployment among women who reported IPV, with rates of 20% among women who experienced psychological violence, 18% among women who experienced physical violence, and 19% among women with PTSD symptoms. When the relationship was adjusted for demographic characteristics and educational attainment, PTSD (adjusted odds ratio [AOR] = 1.60; 95% confidence interval [CI] = 1.22, 2.09) and psychological violence (AOR = 1.78; 95% CI = 1.36, 2.32), but not physical violence, were associated with unemployment. Implications for supported employment programs and workplace responses to IPV are discussed.

Keywords: *intimate partner violence; employment; posttraumatic stress disorder*

Research suggests that intimate partner violence (IPV) affects between 2% and 10% of women annually (Kimerling & Baumrind, 2004; Tjaden & Thoennes, 2000). Many studies have documented the negative physical and mental health consequences of IPV: Among the most debilitating health effects are acute injuries; chronic conditions, such as gastrointestinal, gynecological, and cardiac health problems; and mental health problems, including depression, anxiety, and posttraumatic stress disorder (PTSD; Campbell, 2002; Coker et al., 2002; Coker, Smith, Bethea, King, & McKeown, 2000; Dutton, Kaltman, Goodman, Weinfurt, & Vankos, 2005; Leserman, Li, Drossman, & Hu, 1998; Sutherland, Bybee, & Sullivan, 2002). A burgeoning literature has also demonstrated socioeconomic effects of IPV. In particular, welfare reform legislation has prompted studies that document IPV and its associated physical and mental health consequences as a barrier to stable employment and adequate earnings among poor women (Chandler, Meisel, Jordan, Rienzi, & Goodwin, 2005; Staggs, Long, Mason, Krishnan, & Riger, 2007; Tolman & Wang, 2005). However, the extent to which studies of women participating in Temporary Assistance to Needy Families (TANF) programs may extend to the general population is not yet understood. The issues identified in these studies may be unique to low-income women or to supported employment programs in the post-welfare reform era. The current study seeks to extend this area of inquiry beyond public assistance populations by examining the association of past-year IPV and mental health with unemployment in a large, statewide sample of women.

Prospective studies of poor women and TANF populations have documented a relationship between recent IPV and employment instability, as indicated by decreased intensity and continuity of employment, even after accounting for demographic characteristics and human capital factors

Authors' Note: Data for these analyses were provided by The California Women's Health Survey (CWSH) Group. The CWSH was developed by the California Department of Public Health (CDPH) in collaboration with the California Department of Mental Health, the California Department of Alcohol and Drug Problems, California Medical Review, Inc. (CMRI), the Department of Social Services, and the Survey Research Group of the Public Health Institute. Questionnaire development and funding for the survey were provided by the collaborating programs. Analyses, findings, and conclusions described in this report are not necessarily endorsed by the CWSH Group. Correspondence concerning this article should be addressed to Rachel Kimerling, PhD, VA Palo Alto Health Care System, National Center for PTSD (PTSD-334), 795 Willow Road, Menlo Park, Palo Alto, CA 94025; e-mail: Rachel.Kimerling@va.gov.

(Riger, Staggs, & Schewe, 2004; Tolman & Wang, 2005). There is evidence for a specific, directional effect of violence against women on employment. In a sample of current and former TANF participants followed over 3 years, Staggs and colleagues (2007) found that baseline IPV predicted later employment instability, but baseline employment characteristics did not predict later IPV. Byrne, Resnick, Kilpatrick, Best, and Saunders (1999) conducted similar analyses but used a nationally representative sample of women across all socioeconomic strata. An incident of physical or sexual assault was associated with twice the likelihood of being unemployed 1 year later. An association was not found in the opposite direction: Unemployment was not associated with an increased risk for women's exposure to violence.

Several of these studies have examined psychological distress as a potential mediator of the relationship between IPV and employment stability. A substantial literature suggests that job loss has negative mental health consequences among formerly employed individuals (for a review, see McKee-Ryan, Song, Wanberg, & Kinicki, 2005), but mental health conditions may also be barriers to stable employment among unemployed individuals (Chandler et al., 2005). Several studies have examined whether the negative mental health consequences associated with IPV might account for the observed negative impact on employment. Although Riger et al. (2004) did not find a significant association of depressive symptoms to employment, Tolman and Wang (2005) found that mental health conditions partially mediated the relationship between IPV and employment stability. In a similar prospective study of TANF participants, Chandler et al. (2005) found that mental health conditions were associated with a decreased likelihood of employment and fewer hours of work per week. PTSD symptoms may be particularly salient in the relationship of IPV to employment. This diagnosis appears to be one of the most robust determinants of unemployment and low earnings among other trauma-exposed populations, such as military veterans (Savoca & Rosenheck, 2000; Smith, Schnurr, & Rosenheck, 2005). Among women, the prevalence of PTSD is significantly higher among welfare participants (Kimerling & Baumrind, 2004), and in welfare populations PTSD symptoms are associated with decreased employment stability (Meisel, Chandler, & Rienzi, 2003).

Qualitative studies have elucidated several other pathways through which IPV might impede employment. Swanberg and Logan (2005) interviewed women who were employed and experiencing IPV and found that abusers would interfere with women's employment by physically injuring and restraining them; making harassing phone calls to them, a supervisor, or their coworkers; stalking at work; or destroying work clothes. Similar themes emerge from studies of women with children recruited from IPV

treatment settings, where participants reported employment termination for reasons such as abuser-inflicted injuries or threats, excessive absence, psychological distress, and seeking safety from abuse (Zink & Sill, 2004). These themes are corroborated by a quantitative study of partner stalking, which was associated with higher rates of harassment at work, work disruption, and violence-related job performance problems among a sample of women recruited from domestic violence courts (Logan, Shannon, Cole, & Swanberg, 2007). These studies point to the key role that psychological and emotional abuse, threats of violence, and stalking can play in women's ability to achieve or maintain employment. According to the Centers for Disease Control and Prevention, these factors are key components of IPV (Saltzman, Fanslow, McMahon, & Shelley, 1999). Ridicule and humiliation, threatening violence, controlling a woman's activities, or stalking can all be included under the umbrella of psychological violence and may be particularly relevant to employment outcomes.

Psychological abuse may have unique effects on health and functioning beyond those attributed to physical or sexual violence. For example, in a study of 149 women recruited from the legal system, physical violence and injury were associated with strategic responses, such as seeking legal assistance and other attempts to leave the relationship, whereas psychological abuse was the primary determinant of traumatic stress responses (Dutton, Goodman, & Bennett, 1999). The association of psychological abuse with PTSD symptoms, even when effects of physical abuse are controlled, appears to be a reliable finding (Street & Arias, 2001). In one of the most rigorous studies of the impact of psychological abuse, Coker and colleagues (2000) assessed physical health and IPV in a primary care sample. The authors found that psychological abuse was associated with a wide range of medical and mental health disorders, an impact commensurate with that of physical violence. To our knowledge, no studies have examined the relationship of physical and psychological abuse to the economic correlates of IPV.

The goal of the current study is to examine the association of psychological and physical IPV and employment status in a statewide sample of women. Our study will extend research that has primarily been conducted with women receiving public assistance by examining the relationship of recent IPV with employment among women across economic strata. We hope to further characterize the relationship of IPV to women's employment by accounting for current symptoms of PTSD, which may have a significant impact on women's economic well-being.

Method

Participants

Data for the current study are from the California Women's Health Survey (CWSH), an annual random-digit-dialed probability sample of the adult (aged 18 years and over) female population of California. The annual statewide sample size is approximately 4,000 randomly selected participants. The survey is sponsored by the California Department of Public Health and designed in collaboration with several other state agencies and departments and is conducted by the Public Health Institute Survey Research Group. The staff and procedures for the CWSH are identical to California's administration of the Behavioral Risk Factor Surveillance System (Stein, Lederman, & Shea, 1993). Interviews for the CWSH are conducted in English and Spanish and take approximately 30 minutes to complete.

We combined samples from the years 2001, 2003, and 2004 for a total of 12,972 respondents. The percentage of eligible women who agreed to participate in the CWSH was 74% in 2001, 72% in 2003, and 74% in 2004. This study was approved by the Administrative Panel on Human Subjects in Medical Research at Stanford University School of Medicine. Additional details of the survey are described elsewhere (California Department of Health Services, 2005; Kimerling & Baumrind, 2005). Our analyses were limited to respondents younger than 65 years (10,955, 84.5%), active labor force participants (7,516, 68.6%; see Employment below), and those with complete data for all study variables, yielding a final sample of 6,698 women (89.1%). Women with complete data were less likely to be in the youngest or oldest age group, $\chi^2(4) = 45.1, p < .001$, more likely to be White, $\chi^2(4) = 54.1, p < .001$, and more likely to have a college-level education or higher, $\chi^2(3) = 57.9, p < .001$.

Measures

Employment. Women were asked about their current work status. Women were coded as employed if self-reported employment status was full-time, part-time, or self-employed; those who reported being out of work were coded as unemployed. The sample excluded women who were out of the labor force, defined as those who indicated they were a homemaker, student, retired, or disabled/unable to work.

IPV. Items adapted from the Conflict Tactics Scale (Straus, Hamby, Boney-McCoy, & Sugarman, 1996) assessed past-year IPV from a current or former partner. Physical/sexual violence items assessed whether a partner threw something at them; pushed, grabbed, shoved, or slapped them; kicked,

bit, or hit them with a fist; beat them up or choked them; forced them to have sex against their will; or used a knife on or fired a gun at them. Psychological abuse/stalking items assessed whether a partner had followed or spied on them, caused them to fear for their safety, or tried to control most or all of their daily activities. Women who responded positively to items in either category were coded positively for IPV.

PTSD. A widely used four-item screen for PTSD (Hoge, Auchterlonie, & Milliken, 2006; Prins et al., 2004) was included. Items that assess the four empirically derived factors of PTSD symptoms (reexperiencing, avoidance, hyperarousal, numbing) have a yes/no response format. Individuals who endorse three or more symptom categories are considered to have screened positive for clinically significant levels of PTSD symptoms. Psychometric studies indicate that this screen has a sensitivity of .78 and a specificity of .87 and an 85% rate of agreement with clinician diagnoses of PTSD using structured clinical interviews (Kimerling, Trafton, & Nguyen, 2006; Prins et al., 2004).

Demographic variables. Relevant demographic characteristics were also included in analyses. Age was categorized into five age groups, ranging from 18–24 to 55–64. Self-reported race/ethnicity was categorized as White, Black, Hispanic, Asian/Pacific Islander, and Native American. We also accounted for whether respondents were born in the United States. Educational level was categorized as not a high school graduate, high school graduate, some college or technical school, and college graduate or higher.

Data Analysis

Logistic regression equations were used to test multivariate models and to obtain adjusted odds ratios and 95% confidence intervals. A multivariate logistic regression model was used to predict employment based on the following variables: age, race/ethnicity, nativity, education, physical IPV, psychological IPV, and PTSD symptoms. We used SPSS for Windows, Version 13.0 for all analyses. Poststratification weights were used in all analyses to reflect the sample design and the age and race/ethnicity distributions of California women according to the year 2000 Census.

Results

Past-year physical IPV was reported by 6.2% of women, and 9.0% of women reported past-year psychological IPV. Both types of violence were reported by

Table 1
Descriptive Statistics for Sample by Employment Status
(*N* = 6,698) and ORs and 95% CIs for Unemployment

	Unemployed (<i>n</i> = 747) ^a		Employed (<i>n</i> = 5,951)		OR	95% CI
	<i>n</i>	%	<i>n</i>	%		
Age						
18–24	198	26.5	919	15.4	1.75	1.31–2.33 ^b
25–34	177	23.7	1,446	24.3	0.99	0.75–1.32
35–44	171	22.9	1,579	26.5	0.88	0.66–1.17
45–54	127	17.0	1,406	23.6	0.74	0.54–1.00
55–64	74	9.9	601	10.1	1.00	—
Race/ethnicity						
White	243	32.6	2,966	49.8	1.00	—
Black	57	7.6	413	6.9	1.69	1.24–2.29 ^b
Hispanic	305	40.9	1,589	26.7	2.34	1.96–2.80 ^b
Asian/Pacific Islander	108	14.5	793	13.3	1.66	1.30–2.11 ^b
Native American	33	4.4	190	3.2	2.14	1.45–3.17 ^b
Foreign born	317	42.4	1,597	26.8	2.01	1.72–2.35 ^b
Education						
Less than high school graduate	149	19.9	599	10.1	3.72	2.92–4.74 ^b
High school graduate	251	33.6	1,242	20.9	3.02	2.44–3.73 ^b
Some college or technical school	194	26.0	1,823	30.6	1.59	1.28–1.99 ^b
College graduate or higher	153	20.5	2,287	38.4	1.00	—
Physical IPV	76	10.2	340	5.7	1.87	1.44–2.43 ^b
Psychological IPV	127	17.0	475	8.0	2.37	1.91–2.93 ^b
PTSD	87	11.6	361	6.1	2.04	1.59–2.62 ^b

Note: OR = odds ratio; CI = confidence interval; IPV = intimate partner violence; PTSD = posttraumatic stress disorder.

a. Numbers do not add up to 747 in the race/ethnicity category due to the use of weights and rounding within cells.

b. The 95% CI does not include 1.00.

4.1% of women. Past-month PTSD was reported by 6.7% of women; 27.8% of women with PTSD reported physical IPV in the past year and 25.9% reported psychological IPV. Unemployment was reported by 11.1% of women. Sociodemographic characteristics differed by unemployment status (see Table 1). Unemployed women were significantly more likely to report current PTSD and both past-year physical and psychological IPV. Results indicated substantial rates of unemployment among these women: 19.4% of women who screened positive for current PTSD were unemployed, 21.1% of women who experienced psychological IPV were unemployed, and 18.3% of women who experienced physical IPV were unemployed.

Table 2
AORs and 95% CIs for Unemployment (N = 6,698)

	AOR ^a	95% CI
Age		
18–24	1.28	0.95–1.73
25–34	0.79	0.59–1.06
35–44	0.74	0.55–1.00
45–54	0.70	0.52–0.96 ^b
55–64	1.00	—
Race/ethnicity		
White	1.00	—
African American	1.42	1.03–1.94 ^b
Hispanic	1.21	0.97–1.52
Asian/Pacific Islander	1.34	1.01–1.78 ^b
Native American	1.56	1.04–2.34 ^b
Foreign born	1.74	1.41–2.15 ^b
Education		
Less than high school graduate	2.49	1.88–3.29 ^b
High school graduate	2.54	2.02–3.20 ^b
Some college/technical school	1.46	1.16–1.84 ^b
College graduate or higher	1.00	—
Physical IPV	0.98	0.71–1.36
Psychological IPV	1.78	1.36–2.32 ^b
PTSD	1.60	1.22–2.09 ^b

Note: CI = confidence interval; AOR = Adjusted odds ratio; IPV = intimate partner violence; PTSD = posttraumatic stress disorder.

a. Adjusted using a multivariate regression model for all other variables in the table.

b. 95% confidence interval does not include 1.00.

Multivariate Model for Unemployment

We modeled employment status by examining effects of physical IPV and psychological IPV together with PTSD and adjusting for sociodemographic covariates (see Table 2). Past-year physical IPV was not significantly associated with unemployment in this model, but past-year psychological IPV was significantly associated with a greater likelihood of unemployment. Current PTSD was also significantly associated with greater likelihood of unemployment. We conducted post hoc analyses excluding PTSD from the model to test whether effects of physical violence were accounted for by PTSD, but effects for both physical and psychological IPV did not significantly differ with the exclusion of PTSD.

Discussion

Our results add compelling evidence to the growing body of research that documents significant deleterious economic consequences of IPV among women. We documented higher rates of recent physical and psychological IPV as well as current PTSD among unemployed women, as compared to employed California women. When we adjusted our model for key employment-related sociodemographic factors such as race/ethnicity, education, and foreign-born status, psychological IPV but not physical IPV emerged as a significant predictor of unemployment. These results do not necessarily rule out the role of physical IPV in women's employment outcomes but do highlight the robust population-level association found between psychological IPV and employment status. Our results extend prior research that has identified the negative health and mental health effects associated with psychological IPV, even in the absence of physical violence. This finding is also consistent with qualitative studies and other preliminary work that implicates a partner's controlling behaviors or stalking in employment difficulties among abused women. This study is an important addition to the literature, where studies have primarily either focused solely on physical IPV or included psychological abuse but not examined the specific effects associated with these experiences. Additional research that can continue to elucidate the role of psychological abuse in women's labor force participation is warranted.

Although our data clearly demonstrate an association of physical IPV to unemployment in bivariate analyses, this association did not remain in the adjusted model. This stands in notable contrast to previous work conducted with welfare samples and low-income women that suggests that physical IPV is associated with a variety of negative employment outcomes (Staggs et al., 2007; Staggs & Riger, 2005; Tolman & Wang, 2005). Other studies, however, have failed to find an association of physical IPV with employment status, as conceptualized in our study (Brush, 2000; Lloyd & Taluc, 1999). Our lack of effects for physical violence in the adjusted model could have been owing to our focus on employment status, rather than more sensitive measures of hours worked, wages, or length of continuous employment. Furthermore, in comparison to these studies of welfare and low-income samples, a smaller proportion of women in our population-based sample were exposed to serious and chronic relationship violence. Our findings for physical violence could also have been because of the relatively lower frequency of severe violence in population-based samples and the significant overlap of physical IPV with psychological IPV. Future research on the specific effects of physical violence on women's workforce participation may

best be addressed in more focused clinical or legal samples with higher base rates of violence. Effects of physical IPV that were not detected in this study might also be more apparent in populations selected for high risk of employment problems. Our results suggest that this population would include African American, Asian, and Native American women; immigrant women; and especially women with lower levels of education.

PTSD symptoms were also significantly linked to women's unemployment in the full model, consistent with studies of other populations reporting high rates of trauma. Individuals suffering from PTSD experience a range of symptoms, such as unwanted and unpleasant traumatic memories, physiological hyperarousal, and difficulties with concentration, which could negatively impact the ability to obtain and maintain employment. Avoidance of places, people, or situations that serve as reminders of the trauma(s) could also lead to vocational difficulties. Individuals with acute PTSD demonstrate poorer work potential on factors such as coping, social skills, problem solving, and time management (Matthews, 2005). These symptoms have the potential to become a chronic impairment among a substantial portion of sufferers, especially when the symptoms occur in response to prolonged or repeated trauma such as IPV (Davidson, Hughes, Blazer, & George, 1991; Perkonig et al., 2005). PTSD deserves further study as a barrier to employment among women who have experienced partner violence.

Several limitations should be noted in the interpretation of our results. One limitation of our study is the cross-sectional design. Although our results are consistent with previous research demonstrating a directional relationship between IPV and later employment instability (Byrne et al., 1999; Tolman & Wang, 2005), we are unable to rule out the possibility that employment has protective effects on the incidence of IPV and PTSD or that both are caused by a common third factor. Although prospective studies have failed to support causal relationships between employment and the incidence of violence, additional research is needed to ensure the health and safety of women in violent relationships who participate in TANF or other interventions designed to promote workforce participation. Future studies would also be strengthened by a more sensitive measure of employment. We were limited to a dichotomous measure of employment status and did not measure the intensity or continuity of employment, which may have resulted in more robust effects for both physical and psychological IPV. We were also unable to distinguish among employed women the jobs that yielded adequate earnings and contributed to economic self-sufficiency. Nonetheless, this study provides valuable preliminary data to suggest a population-level relationship between women's employment status and psychological IPV and PTSD.

The associations identified in our study are relevant to further study of women's employment. Specifically, psychological abuse and PTSD appear to be key elements of the relationship between IPV and employment status, and these elements are not limited only to women in poverty. The magnitude of the relationships observed in our results suggests that a public health approach to the economic issues associated with IPV is warranted. Most notably, more than 20% of women experiencing any psychological abuse were unemployed, indicating that stalking, controlling, and emotionally abusive behaviors by intimate partners have a substantial impact on women's workforce participation. Workplace policies and community services should be investigated for their ability to sustain current employment among women experiencing all types of relationship violence. Policies such as workplace support, flexible schedules, and increased security at work may help women maintain employment (Swanberg, Macke, & Logan, 2007) and possibly prevent increasing economic dependence on violent partners.

Improving prevention, identification, and treatment of IPV and its sequelae, such as PTSD, may help women gain the material and social resources necessary to achieve and maintain employment. Both in the workplace and in supported employment programs, IPV awareness and education should include all types of violence, including psychological IPV. Providers in social service and supported employment programs should be especially aware of these issues, as noted by Swanberg et al. (2007), to help women manage workplace disclosure of violence or match women to employment settings that are responsive to the needs of women recovering from violence. Our results regarding PTSD indicate that mental health treatment may also play a key role women's workforce participation. This study is among the first to suggest that IPV and psychological sequelae such as PTSD are significantly associated with women's unemployment across socioeconomic strata. Further attention to this area can help to delineate the full impact of violence against women on women's economic well-being and promote women's health, safety, and economic independence.

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