

ORIGINAL ARTICLE

The Association of Intimate Partner Violence and Depressive Symptoms in a Cohort of Rural Couples

Lynette M. Renner, PhD, MSW;¹ Leah Habib, MD;^{2,3} Ann M. Stromquist, PhD;⁴ & Corinne Peek-Asa, PhD²

¹ School of Social Work, College of Liberal Arts and Sciences, The University of Iowa, Iowa City, Iowa

² Department of Occupational and Environmental Health, College of Public Health, The University of Iowa Injury Prevention Research Center, Iowa City, Iowa

³ Roy J. and Lucille A. Carver College of Medicine, The University of Iowa, Iowa City, Iowa

⁴ Department of Occupational and Environmental Health, College of Public Health, The University of Iowa Great Plains Center for Agricultural Research, Iowa City, Iowa

Funding: Support for this project was provided by the CDC/NCIPC-funded University of Iowa Injury Prevention Research Center (1R49CE002108), and the CDC/NIOSH-funded Great Plains Center for Agricultural Health (U54/OH007548), both housed in The University of Iowa Department of Occupational and Environmental Health.

Note: Leah Habib is now affiliated with Emory University, School of Medicine, Department of Psychiatry and Behavioral Sciences.

For further information, contact: Lynette M. Renner, School of Social Work, College of Liberal Arts and Sciences, University of Iowa, 308 North Hall, Iowa City, IA 52242; e-mail: lynette-renner@uiowa.edu.

doi: 10.1111/jrh.12026

Abstract

Purpose: The purpose of this study was to estimate the prevalence of physical and emotional intimate partner violence (IPV) perpetration and victimization among adult, cohabitating couples. The association between IPV and depressive symptoms, as well as the severity of depressive symptoms, was reported for both males and females.

Methods: In a rural cohort study, 548 couples completed survey items concerning physical and emotional IPV, and mental health.

Findings: Males and females who perpetrated physical IPV were 17.7 and 11.5 times more likely, respectively, to also be victims of physical IPV. Male and female perpetrators of emotional IPV were 18.7 and 5.2 times as likely, respectively, to also be victims of emotional IPV. Males and females with IPV histories were 3.0 and 2.4 times more likely, respectively, to have depressive symptoms ($P < .001$) than those without abuse histories. Females reported higher scores than males on the depressive symptoms index.

Conclusions: This study suggests that many couples in rural areas use physical and emotional violence against each other in their relationships, and that both males and females who report a history of IPV are more likely to report depressive symptoms. These findings support IPV screening for physical and emotional violence among all patients and providing follow-up intervention programs in health care settings.

Key words abuse, domestic violence, gender symmetry, mental health, rural.

Intimate partner violence (IPV) has become a key priority for public health due to the increased risk of injury, death, and poor health status for victims compared to nonvictims. IPV includes physical, sexual, psychological/emotional violence, or threats of violence.¹ There can be significant variation in the prevalence of IPV depending on the definition, methodology, and population. Still, general population studies estimate annual rates of female IPV victimization between 2.3% and 27%.²⁻⁶ Studies in health care settings place lifetime estimates between 37% and 54%.⁷⁻¹⁰ Data from the National Intimate

Partner and Sexual Violence Survey revealed that 35.6% (or approximately 42.4 million) of females and 28.5% (or approximately 32.3 million) of males in the United States have experienced rape, physical violence, and/or stalking by an intimate partner at some point in their lifetime.¹¹

According to the US Census Bureau, in 2010, 19.3% of the US population was classified as rural residents.¹² Within this classification, "rural" consists of all territory, population and housing units located outside of urbanized areas (less than 50,000 people) and urban clusters

(more than 2,500 people but less than 50,000 people). Despite nearly 1 in 5 people considered a rural resident, there is little data on the extent of IPV experienced by this population. A population-based study of over 25,000 males and females from 16 states revealed that 26.7% of females and 15.5% of males in rural areas reported some form of physical or sexual IPV during their lifetime.¹³ The prevalence rates for rural and nonrural males and females did not significantly differ, although rural residents of several states had significantly higher lifetime IPV prevalence compared to their nonrural counterparts.¹³ Despite comparable IPV prevalence, rural residents may be especially vulnerable to the risks of IPV due to the lack of physical and mental health services.^{14,15}

The relationship between physical IPV victimization and poor health outcomes has been well documented, especially among females. These include increased posttraumatic stress disorder (PTSD) symptoms and depression,¹⁶⁻¹⁸ substance use or abuse,^{17,18} physical injury to the head, face, neck, and abdomen, chronic headaches, back pain, and gastrointestinal symptoms.^{7,16,19} Experiences of psychological abuse have been found to be associated with even poorer emotional adjustment and physical health among women than experiences of physical abuse.^{7,20-22} The effects of emotional IPV are studied less frequently than physical IPV; yet, depression has been linked with both physical and psychological abuse among women.^{21,23} Despite some evidence, however, research on the connection between emotional IPV and depression has yielded mixed results for women and it is challenging to isolate the source of depression when multiple types of IPV victimization are present.²³ Regardless, the current literature focused on IPV victimization and females' mental health significantly outweighs what is known about the relation between IPV victimization and depression among males.

Both males and females can be perpetrators and/or victims of IPV, although the primary focus continues to be on IPV victimization among females due to higher rates of injury²⁴⁻²⁷ and increased risk of injury or homicide by an intimate partner.^{3,28,29} However, some researchers have reported approximately equal rates of perpetration of IPV by males and females, mostly in general population studies.^{2,24,30-33} These near-equal rates of perpetration are often physical and have been attributed to "common" or "situational" couple violence, a less severe, less frequent, and rarely escalating form of IPV in which abusive episodes are gender symmetric in initiation and reciprocity.³⁴⁻³⁸

IPV places an enormous burden on health care resources, with a recent National Center for Injury Pre-

vention and Control study citing estimated costs of IPV that exceed \$5.8 billion annually.³⁹ A low rate of detection of IPV by medical practitioners has been recognized, mostly due to the lack of reliable correlates and risk factors to use for screening.⁴⁰⁻⁴³ One correlate that has continued to emerge is the presence of depressive symptoms for both perpetrators^{2,9,26,31,44-49} and female victims of IPV.^{2,4,17,18,31,41,48-54} The severity of violence and the severity of depression have also been linked.^{44,50,54}

Examining both IPV victimization and perpetration among males and females, Caetano and Cunradi found higher depressive scores among females who perpetrated physical IPV and males who reported physical IPV victimization.⁴⁸ Data from the National Violence Against Women Survey of women ($n = 6,790$) and men ($n = 7,122$) ages 18-65 revealed that physical IPV victimization was associated with increased depressive symptoms for both men and women.¹⁷ Yet, overall, few researchers have focused on the mental health of male victims of IPV and even less research has been conducted on IPV and mental health among rural populations. In addition, medical screenings continue to focus primarily on female victims, specifically of physical IPV. Male victims of physical IPV and emotional IPV victimization, in general, are seldom examined in health care settings. For example, Coker et al. documented that 25% of participants in a primary health care-based screening would not have been identified as victims if the emotional abuse component had not been considered.⁷

Some researchers have found that emotional abuse is perpetrated more frequently than physical abuse.^{27,55} Emotional abuse has been identified as a precursor to physical abuse.^{44,56,57} In addition, emotional abuse has been found to increase the risk for more frequent physical abuse, regardless of sex.⁵⁵ Yet despite the higher prevalence rate and the negative outcomes, few studies, particularly in the general population, have been conducted to better document both the prevalence of emotional abuse and the negative mental health consequences. Even fewer researchers have focused on the prevalence of IPV and mental health consequences among rural couples. This study adds to the body of research literature on IPV in several ways: (1) this study documents the prevalence of perpetration and victimization of physical and emotional abuse within cohabitating couples of a rural cohort; (2) the association between IPV and depressive symptoms (including the severity of depressive symptoms) is reported for both sexes; and (3) comparisons are drawn between males and females, physical and emotional IPV, and victims and perpetrators of IPV.

METHODS

Study Population

The population studied for this research is from a geographically defined, rural Iowa, community-based, longitudinal cohort study. This study uses one survey period from 1994 through 1997 and is thus, a cross-sectional study nested within the cohort. All study participants are residents of a single county that is entirely rural (no town exceeds a population of 2,500). In this study, we used data from Round 1 of the study. The data collection methods used and the specific county characteristics are described elsewhere.⁵⁸

Of the 1,633 adults in this cohort, 572 couples (70.1% of the cohort) were currently living with a partner and completed the IPV and mental health items. These couples were the sample for this analysis. Sexual orientation was not an inclusion criterion, although all participating couples involved a male and female. Twenty-four couples were eliminated from the cohort because of missing information from one of the partners for independent variables used in the logistic regression models.

The interviews were conducted in person, in a private room, by a trained interviewer, and without the partner being present. The IPV and mental health questions were embedded in a lengthy questionnaire involving multiple health-related questions.

Measures

For abuse questions, subjects were asked about their own behavior toward their partner as well as their partner's behavior toward them in the past 12 months. Physical or emotional abuse could be identified either by the subject or by the subject's partner. Physical abuse was measured using the 7 physical items from the Conflict Tactics Scale (threw something at him/her; pushed grabbed or shoved him/her; slapped him/her; kicked, bit, or hit him/her; threatening him/her with a knife or gun; or using a knife or gun) were used to measure physically abusive acts.⁵⁹ Yllo's Controlling Behavior Questions were used to measure emotional abuse⁶⁰:

1. You felt intimidated and frightened, for example, by your spouse's/partner's shouting, looks, smashing things.
2. You felt isolated by your spouse/partner controlling who you could see or call or where you could go.
3. You felt you were treated like a subordinate, like a servant by your spouse/partner, making you wait on her or him or making important decisions alone.

One question about sexual abuse was asked, but positive responses were too infrequent to include in the analysis.⁶¹ Responses to the behaviors included in the CTS and Yllo's Controlling Behavior Questions were coded into dichotomous variables so that an affirmative answer to any one question indicated the presence of that type of abuse. This provides a broad definition of abuse, in which the report of any single event of physical or emotional violence is considered positive.

An 11-item abbreviated form of the CES-D Depression Symptoms Index was used to measure depressive symptoms.⁶² Subjects with a score greater than or equal to 8 were considered to have depressive symptoms.⁶² Potential alcohol problems were measured by the CAGE questionnaire, which measures self-perceived problems with alcohol use.⁶³

Subjects were considered to be under financial stress if they had experienced a substantial decrease in their income during the past 12 months. The measures used in this analysis have been previously validated, and properties can be found in the references for each scale.

Statistical Analysis

Because other studies have shown that IPV decreases with age,^{3,24,58} age was controlled by dividing the subjects into 3 age groups: young (18-34 years), middle (35-64 years), and older adults (65+ years). Chi-square tests were completed to examine differences in age, marital status, educational background, and abuse history between males and females. Multivariable logistic regression analyses were then executed to estimate the effect of independent variables (age, education, financial stress, depressive symptoms, and abuse history) on the likelihood of being a victim and/or perpetrator of physical and/or emotional abuse. Separate models were used for males and females. Potential alcohol problems were examined, but not included in models because the prevalence was very low for both males (6.9%) and females (1.6%). Including alcohol in the models did not alter odds ratios for other variables, and thus alcohol was not acting as a confounder in these data.⁶³ Hoesmer-Lemeshow goodness-of-fit and likelihood ratio tests were analyzed to evaluate the appropriateness of each model. All statistical analyses were conducted using SAS version 9.0 for windows software (SAS Institute Inc., Cary, North Carolina).

Results

Prevalence of Abuse

In this cohort study, significantly more females (50.9%) than males (40.0%) indicated at least 1 experience as

Table 1 Demographic Characteristics and Abuse Histories in a Cohort of Rural, Cohabiting Adult Couples

	Male n (%)	Female n (%)	P value
Total	548 (50.0%)	548 (50.0%)	
Age			
18-34	41 (7.5%)	76 (13.9%)	
35-64	349 (63.7%)	350 (63.9%)	
65+	158 (28.8%)	122 (22.3%)	< .001
Marital status			
Married	529 (96.5%)	533 (97.3%)	
Other	19 (3.5%)	15 (2.7%)	.48
Education			
Less than high school graduate	60 (10.9%)	32 (5.8%)	
High school graduate	326 (59.5%)	284 (51.8%)	
More than high school	162 (29.6%)	232 (42.3%)	< .001
Financial stress			
Yes	82 (15.0%)	86 (15.7%)	
No	466 (85.0%)	462 (84.3%)	.74
Depressive symptoms			
Yes	73 (13.3%)	103 (18.8%)	
No	475 (86.7%)	445 (81.2%)	.01
Any abusive acts in previous 12 months			
Any perpetration or victimization of physical or emotional abuse	219 (40.0%)	279 (50.9%)	< .001
Physical abuse perpetration	33 (6.0%)	41 (7.5%)	.34
Physical abuse victim	63 (11.5%)	45 (8.2%)	.07
Emotional abuse perpetration	131 (23.9%)	114 (20.8%)	.22
Emotional abuse victim	165 (30.1%)	248 (45.3%)	< .001
Perpetration of both types of abuse	19 (3.5%)	26 (4.7%)	.29
Victim of both types of abuse	40 (7.3%)	35 (6.4%)	.55

the perpetrator or victim of physical or emotional IPV within the past year (Table 1). Approximately 80% of the physical abuse reported by both males and females was moderate, with less than 20% reported in the severe range. The prevalence of emotional IPV was higher than that of physical IPV for both males and females. Females reported significantly more emotional IPV victimization (45.3%) than males (30.1%). Although reported victimization of physical abuse was slightly higher among males (11.5%) than females (8.2%), this difference was not statistically significant. These prevalence measures do not account for the frequency or severity of abuse.

For both males and females, perpetration and victimization were strongly associated (Table 2). Males who perpetrated physical abuse had an increased odds of 17.7 (95% CI; 7.5-42.0) for also reporting physical abuse victimization compared to males who were not physical abuse perpetrators. Similarly, female perpetrators of physical abuse had an increased odds of 11.5 (95% CI;

5.0-26.7) for also reporting physical abuse victimization. However, males who perpetrated physical abuse were not more likely to be victims of emotional abuse, while females who perpetrated physical abuse were more likely to be victims of emotional abuse.

Perpetrators of emotional abuse, both males and females, had approximately double the odds of being victims of physical abuse. However, males who perpetrated emotional abuse had increased odds of 18.7 for being a victim of emotional abuse, while females had increased odds of 5.2.

Physical and emotional abuse was also strongly associated for both males and females. Participants who reported victimization of either type of abuse had over double the odds of also being a victim of the other type of abuse.

Risk Factors for Abuse

Table 3 presents the risk factors for physical and emotional IPV perpetration and victimization. For both males and females, older age and more than a high school education were associated with reduced risk for any IPV history as well as for IPV by type and role (perpetrator or victim). Financial stress, which has been linked in previous research with both marital discord and depression,⁴⁸ was weakly associated with increased IPV.

Males and females with depressive symptoms were 3.0 and 2.4 times as likely, respectively, to have an abuse history within the past year when compared to those without depressive symptoms. Females reported higher levels of depressive symptoms and a stronger association with abuse when compared with males. Depressive symptoms were most strongly associated with physical abuse for females but emotional abuse victimization for males.

Because depression was related to abuse, we examined the average depressive symptom scores by IPV types (Table 4). Scores were generally higher for females. Among males, the highest scores were reported for perpetrators of both physical and emotional IPV (13.0, 95% CI; 8.5-17.5). In contrast, the highest scores for females were reported for victims of physical IPV (14.2, 95% CI; 11.3-17.1) and victims of both types of abuse (14.2, 95% CI; 11.1-17.3).

Discussion

Little is known about the prevalence of IPV among rural couples, especially measures that include both partners. The purpose of this study was to estimate the prevalence of physical and emotional IPV perpetration and victimization among this population. Using a population-based

Table 2 Risk of Abuse Victimization by Abuse Perpetration, Abuse Type, and Sex, Among Rural, Cohabiting Couples (N = 548)

	Risk for Physical Abuse Victimization ^a OR (95% CI)		Risk for Emotional Abuse Victimization ^a OR (95% CI)	
	Male	Female	Male	Female
Physical abuse perpetrator	17.7 (7.5-42.0)	11.5 (5.0-26.7)	0.9 (0.3-2.6)	2.7 (1.0-6.9)
Emotional abuse perpetrator	2.4 (1.1-5.1)	2.1 (1.0-4.7)	18.7 (11.0-31.8)	5.2 (3.1-8.8)
Emotional abuse victim	2.4 (1.1-5.1)	2.3 (1.0-5.3)	n/a	n/a
Physical abuse victim	n/a	n/a	2.3 (1.0-5.0)	2.0 (0.9-4.7)

^aModels were controlled for age, education level, financial stress, and alcohol problems.

Table 3 Risk Factors for Physical and Emotional Abuse Perpetration and Victimization Among Rural, Cohabiting Couples

	Risk For:				
	Any Abuse; Perpetrator or Victim (n = 219) OR (95% CI)	Physical Abuse Perpetrator (n = 33) OR (95% CI)	Physical Abuse Victim (n = 63) OR (95% CI)	Emotional Abuse Perpetrator (n = 131) OR (95% CI)	Emotional Abuse Victim (n = 165) OR (95% CI)
Males (n = 548)					
Age					
18-34	3.4 (1.7-7.0)	1.5 (0.5-4.8)	1.8 (0.7-4.4)	2.2 (0.9-5.4)	1.2 (0.5-2.8)
35-64	1.0	1.0	1.0	1.0	1.0
65+	0.5 (0.3-0.8)	1.0 (0.4-3.0)	0.5 (0.2-1.3)	0.4 (0.2-0.8)	1.0 (0.6-1.7)
Education					
Less than or high school graduate	1.0	1.0	1.0	1.0	1.0
More than high school graduate	0.7 (0.5-1.0)	0.8 (0.3-1.9)	1.0 (0.5-1.8)	1.4 (0.8-2.5)	0.5 (0.3-0.9)
Financial stress					
No	1.0	1.0	1.0	1.0	1.0
Yes	1.6 (1.0-2.6)	1.6 (0.6-4.3)	0.9 (0.4-2.1)	1.5 (0.8-3.0)	1.1 (0.6-2.2)
Depressive symptoms					
No	1.0	1.0	1.0	1.0	1.0
Yes	3.0 (1.8-5.1)	0.9 (0.3-2.7)	1.5 (0.7-3.3)	1.0 (0.5-2.0)	2.9 (1.5-5.4)
Females (n = 548)					
	Any Abuse; Perpetrator or Victim (n = 279) OR (95% CI)	Physical Abuse Perpetrator (n = 41) OR (95% CI)	Physical Abuse Victim (n = 45) OR (95% CI)	Emotional Abuse Perpetrator (n = 114) OR (95% CI)	Emotional Abuse Victim (n = 248) OR (95% CI)
Age					
18-34	1.2 (0.7-2.0)	2.4 (1.0-6.0)	0.4 (0.2-1.3)	2.2 (1.2-4.1)	0.9 (0.5-1.7)
35-64	1.0	1.0	1.0	1.0	1.0
65+	0.5 (0.3-0.8)	0.5 (0.1-1.9)	0.4 (0.1-1.4)	0.7 (0.4-1.4)	0.7 (0.4-1.1)
Education					
Less than or high school graduate	1.0	1.0	1.0	1.0	1.0
More than high school graduate	0.9 (0.6-1.3)	0.9 (0.4-2.0)	0.7 (0.4-1.5)	0.7 (0.3-1.2)	1.1 (0.8-1.7)
Financial stress					
No	1.0	1.0	1.0	1.0	1.0
Yes	2.0 (1.2-3.3)	0.5 (0.2-1.5)	1.3 (0.5-3.1)	2.1 (1.2-3.7)	1.4 (0.8-2.3)
Depressive symptoms					
No	1.0	1.0	1.0	1.0	1.0
Yes	2.4 (1.5-3.8)	2.4 (1.0-5.5)	2.4 (1.1-5.1)	1.8 (1.0-3.2)	1.3 (0.8-2.1)

sample of rural couples, we found 11.5% of males and 8.2% of females reported physical IPV victimization within the past 12 months, while 6% of males and 7.5% of females reported physical IPV perpetration. Data from

the National Intimate Partner and Sexual Violence Survey revealed that 4.7% of males and 4.0% of females reported physical IPV victimization within the past 12 months. We also found that 30.1% of males and 45.3%

Table 4 Average Depressive Symptoms Scores and Mental Health Treatment Levels Among Rural, Cohabiting Couples (N = 548)

	Men		Women	
	Avg score; depressed only	95% CI	Avg score; depressed only	95% CI
All	12.0	11.0-13.0	12.5	9.4-14.8
Any abuse; perpetrator or victim	12.4	11.0-13.8	13.0	11.5-13.4
Physical perpetrator	12.7	10.2-15.1	13.0	11.8-14.3
Physical victim	12.1	9.5-14.7	14.2	10.1-15.9
Emotional perpetrator	12.6	10.6-14.5	13.0	11.3-17.1
Emotional victim	12.7	11.1-14.2	13.1	11.2-14.7
Perpetrator of physical and emotional abuse	13.0	8.5-17.5	12.5	11.7-14.4
Victim of physical and emotional abuse	12.1	9.4-14.8	14.2	9.3-15.7

of females reported emotional IPV victimization within the past 12 months, while 23.9% of males and 20.8% of females reported emotional IPV perpetration. Prevalence data from a nationally representative sample of males and females (N = 11,291) revealed that 15.6% of the sample reported their partner used at least 1 emotionally abusive behavior.⁵⁵ The prevalence of IPV victimization within the past year in our sample of rural couples was higher than rates reported in other studies that relied on nationally based samples.

One of the more important findings of this study is the high proportion of mutual IPV found in couples in this rural cohort. Bidirectional violence is the most common pattern for couples.⁶⁴ We found that males and females who perpetrated physical abuse were much more likely to be victims of physical abuse—increased odds of approximately 18 and 12, respectively. In a birth cohort of 21-year olds in New Zealand, similar odds of mutual couple violence were reported: male and female victims of physical abuse were 19 and 10 times more likely, respectively, to also be perpetrators of physical abuse.² We also found that females who perpetrated emotional abuse were more likely to be victims of emotional abuse, but this relationship was not present for males. Rather than IPV victimization being connected with same-type perpetration, this could indicate that females, but not males, retaliate against emotional abuse with physical aggression.

While we certainly acknowledge that female victims of physical and emotional IPV should remain a high public health priority due to the higher risk of injury and other negative physical and mental health consequences,^{4,7,8,16,18,28,31,41} the presence of mutual couple violence in nearly half of the couples in this cohort population cannot be ignored. It is also important to note, however, that IPV was considered to have occurred if the respondent provided an affirmative response to any items

that assessed physical or emotional violence. The high proportion of IPV within the rural study sample may be due to this low threshold. Future researchers should not only investigate the occurrence of violence within rural populations, but also the frequency of violence.

IPV falls into different categories, including intimate terrorism, violent resistance, and situational couple violence (SCV).³⁵ Intimate terrorism represents a small part of all violence that occurs between intimate partners, but this type is predominant among those instances that come to the attention of law enforcement and other social service agencies. This more severe form of violence is usually initiated by the husband, the violence occurs more frequently, and escalates over time. SCV, in contrast, is the type of violence most frequently found in studies of the general population, such as this one. It does not include a pattern of coercive control. Rather, this type of violence occurs when couple conflicts become aggressive and then violent.³⁵ SCV is usually gender symmetric in initiation and reciprocity, involves more minor forms of violence, and rarely escalates.^{34,35} Because the majority of IPV in our population is gender symmetric, we expect that a majority of the violence within this rural population falls into the SCV category.

So why should we focus on the prevention of common or situational couple violence? Studies of individuals within mutually violent relationships can report high levels of relationship satisfaction and commitment to the relationship, so cessation of the relationship is often not a priority.⁴² If women do leave the relationship, the reason is rarely violence.²⁸ Therefore, motivations exist to remove the violence from the relationship and eliminate the physical and mental health consequences to the victims as well as improve the quality of life for the children witnessing the violence. There is also an incentive to reduce the legal, social service, and police costs to society.⁴²

Another important finding of this study is the correlation between depressive symptoms and physical and emotional abuse for both sexes. We found that both males and females with an abuse history have 3.0 and 2.4 increased odds, respectively, to have depressive symptoms. Perpetration of abuse is associated with an increased risk of depressive symptoms for females but not males. This gender asymmetry in the depressive response to physical aggression was also found in a study by Beach et al., where it was suggested that the partner's subsequent physical control tactics in response to the female's aggression may actually be the cause of increased depressive symptoms.²⁶ The link between depressive symptoms and abuse appears to be stronger for females, but a patient of either gender presenting with depressive symptoms should be screened for an abuse history.

The correlation between female victims of IPV and depression or male perpetrators of IPV and depression has been well documented.¹⁷ Few studies, especially those that are population-based in nature, have examined the impact of physical and emotional abuse victimization on the mental health of males. We found that male victims of emotional abuse had nearly 3 times the odds of having depressive symptoms than nonvictims. Male physical abuse victims had a 50% increase in reported depressive symptoms. A similar study among whites, blacks, and Hispanics found that male victims of moderate physical abuse were 4.0 times more likely to exhibit depressive symptoms.⁴⁸

As does all research, this study has limitations. The results in this rural cohort may not be generalizable to an urban population. We included only cohabitating, adult couples; other types of relationships, including those that may have ended due to violence, were excluded. Self-reports on the CES-D scale only indicate presence of depressive symptoms, and do not indicate a clinical diagnosis of depression. We used a relatively low threshold for violence, and less severe violence may be more commonly associated with mutual abuse.

This study also has several strengths. This is one of the first population-based studies to examine the prevalence of common couple violence in rural areas. Also, this is one of the first population-based studies to consider the relationship between emotional abuse victimization and the mental health of males. The domestic violence and mental health questions were embedded within a lengthy questionnaire about many health-related topics and therefore the interviews were conducted without the other partner present. As this study is planned to continue for 20 years, longitudinal data will be available to analyze changes in mental health and perpetration and victimization of physical and emotional

abuse over time, as well as to determine cause-and-effect relationships.

Conclusion

As these and other findings indicate, the IPV occurring within couples is not homogeneous, and reducing the prevalence of IPV will most likely take a combination of different types of interventions. Male-only batterer treatment programs may work for cases of patriarchal terrorism, but using these standard approaches for treating female perpetrators or in cases of mutual couple conflict may not be appropriate. When there is reciprocal violence in the relationship, treating the male only without addressing the underlying relationship dynamics is unlikely to stop the violence.⁴² Because most of what is known about the communication patterns and causes of violent episodes within couples comes from shelter populations, future research should examine these same communication patterns and causal pathways in general population-based studies of common couple violence.³⁴

One of the first steps in reducing the prevalence of IPV is to increase the identification of IPV in the health care setting through focused screening of males and females. Males who experience IPV victimization do not often report the abuse⁶⁵ and are not always offered the same services as females. Health care providers are primarily trained to screen for IPV victimization among females,⁶⁶ and the results of our study findings point to the need for the development and implementation of IPV screening tools for males.

In addition, the higher risk of depressive symptoms for male physical and emotional abuse victims indicates that negative mental health consequences exist for male as well as female victims of IPV. These findings support that using the presence of depressive symptoms as part of IPV screening for both genders in the health care setting could be beneficial. Future research should evaluate the effectiveness of a depressive symptom-focused, IPV screening survey.

References

1. Saltzman LE, Fanslow JL, McMahon PM, Shelley GA. Intimate partner violence surveillance: uniform definitions and recommended data elements, version 1.0. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. 2002. Available at: <http://www.cdc.gov/ncipc/pub-res/ipv-surveillance/Intimate%20Partner%20Violence.pdf>. Accessed November 27, 2012.

2. Magdol L, Moffitt TE, Caspi A, et al. Gender differences in partner violence in a birth cohort of 21-year olds. *J Consult Clin Psychol*. 1997;65(1):68-78.
3. Rennison CM. Intimate partner violence and age of victim, 1993–1999. *Bur Justice Stat Spec Rep*. Washington, DC: US Department of Justice; 2001, NCJ 187535.
4. Hathaway JE, Mucci LA, Silverman JG, et al. Health status and health care use of Massachusetts women reporting partner abuse. *Am J Prev Med*. 2000;19(4):302-307.
5. Murty SA, Peek-Asa C, Zwerling C, et al. Physical and emotional partner abuse reported by men and women in a rural community. *Am J Public Health*. 2003;93(7):1073-1075.
6. Vest JR, Catlin TK, Chen JJ, et al. Multistate analysis of factors associated with intimate partner violence. *Am J Prev Med*. 2002;22(3):156-164.
7. Coker AL, Smith PH, Bethea L, et al. Physical health consequences of physical and psychological intimate partner violence. *Arch Fam Med*. 2000;9:451-457.
8. Dearwater SR, Coben JH, Campbell JC, et al. Prevalence of intimate partner abuse in women treated at community hospital emergency departments. *JAMA*. 1998;280(5):433-438.
9. Johnson M and Elliott BA. Domestic violence among family practice patients in midsized and rural communities. *J Fam Pract*. 1997;44(4):391-400.
10. Kershner M, Long D, Anderson JE. Abuse against women in rural Minnesota. *Public Health Nurs*. 1998;15(6):422-431.
11. Black MC, Basile KC, Breiding MJ, et al. *The National Intimate Partner and Sexual Violence Survey (NISVS): 2010 Summary Report*. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention; 2011. Available at: <http://www.cdc.gov/violenceprevention/nisvs/>. Accessed November 27, 2012.
12. United States Census Bureau. 2010 Census urban and rural classification and urban area criteria; 2012. Available at: <http://www.census.gov/geo/www/ua/2010Urbanruralclass.html#percent>. Accessed November 27, 2012.
13. Breiding MJ, Ziembski JS, Black, MC. Prevalence of rural intimate partner violence in 16 US States, 2005. *J Rural Health*. 2009;25(3):240-246.
14. Merwin E, Hinton I, Dembling B, Stern S. Shortages of rural mental health professionals. *Arch Psychiatr Nurs*. 2003;17:42-51.
15. Merwin E, Snyder A, Katz E. Differential access to quality rural healthcare—professional and policy challenges. *Fam Community Health*. 2006;29:186-194.
16. Campbell JC. Health consequences of intimate partner violence. *Lancet*. 2002;359:1331-1336.
17. Coker AL, Davis KE, Arias I, et al. Physical and mental health effects of intimate partner violence for men and women. *Am J Prev Med*. 2002;23(4):260-268.
18. Golding JM. Intimate partner violence as a risk factor for mental disorders: A meta-analysis. *J Fam Violence*. 1999;14(2):99-132.
19. Campbell J, Jones AS, Dienemann J, et al. Intimate partner violence and physical health consequences. *Arch Intern Med*. 2002;162:1157-1163.
20. Arias I, Pape KT. Psychological abuse: implications for adjustment and commitment to leave violent partners. *Violence Victims*. 1999;14(1):55-67.
21. Sackett LA, Saunders DG. The impact of different forms of psychological abuse on battered women. *Violence Victims*. 1999;14(1):105-117.
22. Strauchler O, McCloskey K, Malloy K, Sitaker M, Grigsby N, Gillig P. Humiliation, manipulation, and control: evidence of centrality in domestic violence against an adult partner. *J Fam Violence*. 2004;19(6):339-354.
23. Follingstad DR. The impact of psychological aggression on women's mental health and behavior: the status of the field. *Trauma, Violence Abuse*. 2009;10(3):271-289.
24. Sorenson SB, Upchurch DM, Shen H. Violence and injury in marital arguments: risk patterns and gender differences. *Am J Public Health* 1996;86(1):35-40.
25. Mechem CC, Shofer FS, Reinhard SS, et al. History of domestic violence among male patients presenting to an urban emergency department. *Acad Emerg Med*. 1999;6:786-791.
26. Beach SR, Kim S, Cercone-Keeney J, et al. Physical aggression and depressive symptoms: gender asymmetry in effects? *J Soc Pers Relat*. 2004;21(3):341-360.
27. Gortner ET, Gollan JK, Jacobson NS. Psychological aspects of perpetrators of domestic violence and their relationship with the victims. *Psychiatr Clin North Am*. 1997;20(2):337-352.
28. Nicolaidis C, Curry MA, Ulrich Y, et al. Could we have known? A qualitative analysis of data from women who survived an attempted homicide by an intimate partner. *J Gen Intern Med*. 2003;18:788-794.
29. Rennison CM, Welchans S. Intimate Partner Violence. Bureau of Justice Statistics Special Report. Washington, DC: US Department of Justice; 2000, NCJ 178247.
30. Schafer J, Caetano R, Clark CL. Rates of intimate partner violence in the United States. *Am J Public Health*. 1998;88:1702-1704.
31. Grandin E, Lupri E, Brinkerhoff MB. Couple violence and psychological distress. *Can J Public Health*. 1998;89(1):43-47.
32. Mills LD, Mills TJ, Taliaferro E, et al. The prevalence of female-to-male intimate partner violence in an urban emergency department. *J Emerg Med*. 2003;25(2):215-218.
33. Johnson, MP. Gender and types of intimate partner violence: a response to an anti-feminist literature review. *Aggress Violent Behav*. 2011;16:289-296.

34. Olson LN. Exploring "common couple violence" in heterosexual romantic relationships. *Western J Commun.* 2002;66(1):104-128.
35. Johnson MP. Patriarchal terrorism and common couple violence: two forms of violence against women. *J Marriage Fam.* 1995;57(2):283-295.
36. Holtzworth-Munroe A, Meehan JC. Husband violence: personality disorders among male batterers. *Curr Psychiatry Rep.* 2002;4(1):13-17.
37. Fiebert MS. References examining assaults by women on their spouses or male partners: an annotated bibliography. *Sexual Cult.* 2004;8(3-4):140-177.
38. Medeiros RA, Straus MA. Risk factors for physical violence between dating partners: Implications for gender-inclusive prevention and treatment of family violence. In Hamel J, Nicholls TL, eds. *Family approaches in domestic violence: A practitioner's guide to gender-inclusive research and treatment.* New York: Springer; 2006: 59-85.
39. National Center for Injury Prevention and Control. *Costs of Intimate Partner Violence Against Women in the United States.* Atlanta, GA: Centers for Disease Control and Prevention; 2003.
40. Rhodes KV, Levinson W. Interventions for intimate partner violence against women: clinical applications. *JAMA.* 2003;289(5):601-605.
41. Naumann P, Langford D, Torres S, et al. Women battering in primary care practice. *Fam Pract.* 1999;16:343-352.
42. Stith SM, Rosen KH, McCollum EE. Effectiveness of couples treatment for spouse abuse. *J Marital Fam Ther.* 2003;29(3):407-426.
43. Gerbert B, Gansky SA, Tang JW, et al. Domestic violence compared to other health risks. *Am J Prev Med.* 2002;23(2):82-90.
44. Feldbau-Kohn S, Heyman RE, O' Leary KD. Major depressive disorder and depressive symptomatology as predictors of husband to wife physical aggression. *Violence Vict.* 1998;13(4):347-360.
45. Maiuro RD, Cahn TS, Vitaliano PP, et al. Anger, hostility, and depression in domestically violent versus generally assaultive men and nonviolent control subjects. *J Consult Clin Psychol.* 1988;56(1):17-23.
46. Pan H, Neidig P, O' Leary D. Predicting mild and severe husband to wife physical aggression. *J Consult Clin Psychol.* 1994;62:975-981.
47. Hamberger LK, Hastings J. Personality characteristics of spouse abusers: a controlled comparison. *Violence Vict.* 1988;3(1):31-48.
48. Caetano R, Cunradi C. Intimate partner violence and depression among whites, blacks, and hispanics. *Ann Epidemiol.* 2003;13:661-665.
49. Danielson KK, Moffitt TE, Caspi A, et al. Comorbidity between abuse of an adult and DSM-III-R mental disorders. *Am J Psychiatry.* 1998;155:131-133.
50. Dienemann J, Boyle E, Baker D, et al. Intimate partner abuse among women diagnosed with depression. *Issues Ment Health Nurs* 2000;21:499-513.
51. Campbell JC, Kub J, Belknap RA, et al. Predictors of depression in battered women. *Violence Against Women.* 1997;3(3):271-293.
52. Van Hook MP. Challenges to identifying and treating women with depression in rural primary care. *Soc Work Health Care.* 1996;23(3):73-92.
53. Scholle SH, Rost KM, Golding JM. Physical abuse among depressed women. *J Gen Intern Med.* 1998;13:607-613.
54. Stein MB, Kennedy C. Major depressive and post-traumatic stress disorder comorbidity in female victims of intimate partner violence. *J Affect Disord.* 2001;66:133-138.
55. Outlaw M. No one type of intimate partner abuse: exploring physical and non-physical abuse among intimate partners. *J Family Violence.* 2009; 24: 263-272.
56. Murphy CM, O' Leary KD. Psychological aggression predicts physical aggression in early marriage. *J Consult Clin Psychol.* 1989;57:579-582.
57. Capaldi D, Owen LD. Physical aggression in a community sample of at-risk young couples. *J Fam Psychol* 2001;15(3):425-440.
58. Merchant JA, Stromquist AM, Kelly KM, et al. Chronic disease and injury in an agricultural county. *J Rural Health.* 2002;18(4):521-535.
59. Straus MA. Measuring intrafamily conflict and violence: the conflict tactics (CT) scale. *J Marriage Fam.* 1979;41:74-85.
60. Yllo K. Political and methodological debates in wife abuse research. In Yllo K, Bograd M, eds. *Feminist perspectives on wife abuse research.* Newbury Park, CA: Sage; 1990: 28-50.
61. Peek-Asa C, Zwerling C, Young T, Stromquist A, Burmeister L, Merchant J. A population-based study of reporting patterns and characteristics of men who abuse their female partners. *Inj Prev.* 2005;11(3):180-185.
62. Kohout FJ, Berkman LF, Evans DA, et al. Two shorter forms of the CES-D Depression Symptoms Index. *J Aging Health.* 1993;5(2):179-193.
63. Mayfield DG, McLeod G, Hall P. The CAGE questionnaire: validation of a new alcoholism screening instrument. *Am J Psychiatry.* 1974;131:1121-1123.
64. Straus MA. Gender symmetry and mutuality in perpetration of clinical-level partner violence: Empirical evidence and implications for prevention and treatment. *Aggress Violent Behav.* 2011;16(4):279-288.
65. Drijber BC, Reijnders UJL, Ceelen M. Male victims of domestic violence. *J Fam Violence.* 2013;28(2):173-178.
66. Wong SLF, Wester F, Mol SSL, Lagro-Janssen TLM. Increased awareness of intimate partner abuse after training: a randomised controlled trial. *Br J Gen Pract.* 2006;56(525):249-257.