Published in final edited form as:
Psychiatr Serv. 2011 August ; 62(8): 959–962. doi:10.1176/appi.ps.62.8.959.

Mental Health of Victims of Intimate Partner Violence: Results from the National Epidemiologic Survey on Alcohol and Related Conditions

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Abstract

Objective—To assess the national incidence and mental health correlates of recent intimate partner violence.

Methods—Data from the Wave 2 National Epidemiologic Survey on Alcohol and Related Conditions (n=34,653) were analyzed focusing on adults who were married, recently married, or in a romantic relationship (n=25,626). Intimate partner violence (n=1,608) included minor and severe forms of violence. The main outcome measures were the prevalence of intimate partner violence and the association of intimate partner violence with new onset of Axis I disorders.

Results—During the past year, 5.8% of women and 5.6% of men reported being victims of intimate partner violence. New onset axis I disorders were significantly more common among intimate partner violence victims (20.9%) than non-victims (9.4%) (OR=2.55, 2.19–2.97) and were related to frequency of violent acts.

Conclusions—Intimate partner violence is common and victimization, especially if recurrent, markedly increases the risk for developing several psychiatric disorders.

An increase in dating violence has heightened public concern over intimate partner violence. Intimate partner violence is defined as any threatened, attempted, or completed physical or sexual violence, and emotional abuse inflicted by a spouse, ex-spouse, current or former boyfriend or girlfriend, dating partner, or date (1). Approximately 30% of all female homicides are committed by a male intimate (2). The World Health Organization estimates that intimate partner violence costs the United States $12.6 billion or 0.1% of the gross domestic product (GDP) annually (3). Intimate partner violence accounts for 20% of nonfatal violent crimes against women and 3% of those against men (4).

Accumulating evidence relates intimate partner violence to life threatening and significant adverse physical health consequences. Furthermore, intimate partner violence is associated

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Disclaimer: The views and opinions expressed in this report are those of the authors and should not be construed to represent the views of any of the sponsoring organizations, agencies, or the U.S. government.

Conflict of Interest: None

with depression, posttraumatic stress disorder, and substance abuse (5, 6). The National Comorbidity Survey (NCS) reported that 17.4% and 18.4% of women and men respectively were victims of intimate partner violence during the course of their current marriage or cohabitation (7). Similarly, rates in the National Comorbidity Survey Replication (NCS-R) were 15.2% for females and 20.3% for males (8).

Although prior national studies have examined the prevalence and predictive value of psychiatric disorders for intimate partner violence victimization, their cross-sectional design does not permit estimation of the effects of intimate partner violence on risk of incident or new onset psychiatric disorders. By drawing on data from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) a large, nationally representative sample of US adults, we sought to compare the 12-month incidence of psychiatric disorders in individuals who were victims of intimate partner violence during the past 12 months with those who were not victims, and examine whether increased frequency of exposure to violent acts is associated with an elevated incidence of psychiatric disorders.

Methods

The Wave 2 NESARC (2004–2005) design involved face-to-face reinterviews with participants in the Wave 1 interview. Wave 1 of the NESARC was conducted in 2001–2002 and is described in detail elsewhere (9, 10). The target population was the civilian population, 18 years and older, residing in households and group quarters such as boarding or rooming houses, college quarters, and group homes. Face-to-face interviews were conducted with 43,093 respondents, yielding an overall response rate of 81.0%. Excluding respondents ineligible for the Wave 2 interview (e.g. deceased), the Wave 2 response rate was 86.7%, reflecting 34,653 completed interviews. The cumulative response rate for Wave 2 is the product of the Wave 2 and Wave 1 response rates (70.2%). Weighted data were then adjusted to represent the civilian population of the United States on socioeconomic variables based on the 2000 Decennial Census.

All potential NESARC respondents were informed in writing about the nature of the survey, the statistical uses of the survey data, the voluntary aspect of their participation, and the federal laws providing strict confidentiality of the identifiable survey information. Those respondents consenting to participate were interviewed after receiving this information. The research protocol, including informed consent procedures, received full ethical review and approval from the U.S. Census Bureau and the U.S. Office of Management and Budget.

Wave 2 of the NESARC included questions on intimate partner violence. Respondents in the NESARC who were married or living with someone as if married at the time of the interview, and those who responded that in the last 12 months they had been married, dating or involved in a romantic relationship comprised our study sample (n=25,626).

Sociodemographic measures included sex, sexual orientation, race-ethnicity, nativity, age, education, marital status, place of residence, and region of the country. Socioeconomic measures included employment status, personal and family income, and insurance type.

The diagnostic interview was the Alcohol Use Disorder and Associated Disabilities Interview Schedule – DSM-IV Version (AUDADIS-IV), Wave 2 version. This structured interview was designed for administration by experienced lay interviewers and included mood disorders, anxiety disorders, and substance use disorders. AUDADIS-IV methods to diagnose these disorders are described in detail elsewhere (10).

History of intimate partner violence in the last 12 months was assessed with items from the Conflict Tactics Scale, Form R. It is a widely used, valid and reliable measure of family

violence (11). Chronbach α coefficients range from 0.69 to 0.88 for items on physical aggression. The questions were preceded by asking respondents if they were currently married or living with someone as married or if during the past 12 months they had ever married, dated or been involved in a romantic relationship.

Respondents were asked if at least once during the last 12 months they had ever been a) pushed, grabbed, or shoved; b) slapped, kicked, bitten, or hit; c) threaten with a weapon (knife, gun); d) cut or bruised; e) forced to have sex; or, f) injured enough to get medical care. A positive response to one or more item defined intimate partner violence. For each of these behaviors, respondents were asked their frequency during the previous year (Appendix).

To minimize the possibility that associations between intimate partner violence and 12-month psychiatric disorders were due to psychiatric disorders preceding intimate partner violence, we estimated the incidence of psychiatric disorders. Incidence rates were calculated as the number of new cases of psychiatric disorder during the year preceding the Wave 2 interview among all respondents who reported and did not report intimate partner violence victimization. The denominator for each disorder comprised the total number of individuals in the intimate partner violence sample with no prior history of that disorder at the start of the year. This incidence rate was expressed as a percentage.

The frequency with which individual items were endorsed from the Conflict Tactics Scale was determined overall and stratified by respondent gender. The 12-month prevalence of intimate partner violence was then determined overall and stratified by respondent sociodemographic and socioeconomic group.

A series of logistic regression models were fit to evaluate the effect of each background characteristic on risk of intimate partner violence. We also examined associations between frequency of each intimate partner violence act and incidence of psychiatric disorders. Results are presented as odds ratios (ORs) with associated 95% confidence intervals. Weighted means, frequencies and odds ratios (ORs) of sociodemographic correlates and incident psychiatric disorders were also computed. Adjusted odds ratios (AORs) derived from multiple logistic regressions indicate associations between a specific outcome (e.g., psychiatric disorders) and sociodemographic and socioeconomic correlates that differed between those who did and did not experience intimate partner violence. We consider two percentage estimates significantly different from each other if their 95% confidence intervals (95% CI) do not overlap. ORs are considered significant if their 95% CIs do not include 1. All standard errors and 95% CIs were estimated using SUDAAN (10) to adjust for the survey design characteristics.

Results

During the course of one year, 5.8% of women and 5.6% of men reported being victims of intimate partner violence. The overall odds did not significantly differ by sex. Approximately one in five (21%) respondents reporting intimate partner violence had an incident axis I psychiatric disorder during the 12-month period before the Wave 2 interview (Table 1). Intimate partner violence victims had significantly greater odds than non-victims for all measured incident psychiatric disorders, except social anxiety disorder and specific phobia. Among victims, incidence rates were highest for alcohol dependence, nicotine dependence, generalized anxiety disorder, and posttraumatic stress disorder. Compared to respondents not experiencing intimate partner violence, the greatest odds for victims were reported for drug abuse and dependence, bipolar I and II disorders, alcohol dependence,

posttraumatic stress disorder, and generalized anxiety disorder. The ORs remained significant after adjusting for sociodemographic and socioeconomic variables.

For most of the violent acts, there was a direct relationship between the frequency of the acts and the incidence of a psychiatric disorder (Appendix).

Women were significantly more likely than men to have been cut, bruised, or forced to have sex (Appendix). By contrast, men were more likely than women to have been slapped, kicked, bitten or hit. Men and women were roughly equally likely to have been pushed, grabbed, shoved, threatened with a weapon, or injured enough to seek medical help in the past 12 months.

Discussion

In a large, nationally representative sample of US adults, roughly 5.8% of women and 5.6% of men reported being victims of intimate partner violence in the course of one year. As a group, these adults were at markedly increased risk for developing a wide range of psychiatric disorders. Moreover, increased frequency of the violent acts contributed to increased risk of developing a psychiatric disorder.

In accord with previous research (12), the prevalence of intimate partner violence victimization did not significantly differ across genders. Although women in the present study were more likely than men to be victims of sexual violence, both genders were equally likely to have been threatened with a weapon and to have sustained injuries leading to medical care. This pattern of victimization suggests that increased efforts may be needed to expand services to men who are victims of intimate partner violence. To our knowledge, specific treatment programs to address the needs of male victims do not exist, and existing services for men focus on decreasing their perpetration of violence. Community-based advocacy and counseling services for intimate partner violence victims have shown promise at decreasing rates of re-abuse, increasing service access, enhancing social support, and improving quality of life (13). Identification of victims appears to influence outcomes of care (14). Though more evidence-based studies on interventions for victims are clearly still needed, available clinical guidelines might be useful to health care providers (14).

Approximately one-fifth of those victimized in the previous 12 months suffer from a new onset psychiatric disorder, and the risk of new onset is related to the frequency of the violence. Intimate partner violence is associated not only with an increased risk of posttraumatic stress disorder, major depressive disorder and substance use disorders, as previously reported (5, 6), but also with bipolar disorder, panic disorder, and generalized anxiety disorder. Previous research indicates that a history of child physical and sexual abuse increase the prevalence of several disorders in adulthood (15). Our results further document that violence by intimates experienced as adults may increase the risk of new-onset psychopathology. Some of the theorized mechanisms by which abuse in childhood leads to increased rates of psychopathology, such as disruptions in the sense of self, inability to regulate reactions to stressful events, and other interpersonal and emotional challenges may have analogues in adult interpersonal violence. Detailed clinical psychopathological research is needed to uncover the mechanisms that govern the observed associations between intimate partner violence and mental disorder onset in adults.

The present study has several limitations. First, information on intimate partner violence was based on self-report and was not confirmed by collateral informants or criminal justice system records. Second, due to the chronic nature of intimate partner violence, some individuals who had been victimized in the past 12 months could already have a subsequent psychiatric disorder and thus were not included among the incident cases resulting in an

underestimation of the affected population. However, even our conservative estimates using incidence rates demonstrate a significant and substantial association between intimate partner violence and incident psychiatric disorder. Third, our sample included individuals with changes in their marital status and it is not possible to determine whether these changes preceded or antedated the intimate partner violence.

Conclusion

Intimate partner violence is highly prevalent in the United States, affects both men and women, and is associated with onset of a broad range of psychiatric disorders. Physicians and other health care professionals may have opportunities to play a key role in identifying victims, helping them mobilize resources, extricating them from victimizing relationships, helping them to acquire the necessary skills to build social supports, reduce psychological distress, and lowering the risk of psychiatric disorder onset. Findings from this study highlight the urgency of expanding access to interventions that target the suffering from violence within intimate adult relationships.

Acknowledgments

Funding/Support: The National Epidemiologic Survey on Alcohol and Related Conditions was sponsored by the National Institute on Alcohol Abuse and Alcoholism and funded, in part, by the Intramural Program, NIAAA, and National Institutes of Health. This study is supported by NIH grants DA019606, DA020783, DA023200, DA023973 and MH076051, P60 MD000206, R01 AA08159, K05 AA00161 and U01 AA018111, and the American Foundation for Suicide Prevention.

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Table 1

Twelve-month incidence rates of axis I disorders among intimate partner violence victims and non-victims

	Intimate partner violence in the past 12 months N=1,608		No intimate partner violence in the past 12 months* N=24,018							
	%	SE	%	SE	OR	(95% CI)		AOR**	(95% CI)	
Any Axis I Disorder	20.9	1.2	9.4	0.2	2.6	2.2	3.0	1.9	1.7	2.3
Any Substance Use disorder	13.0	1.1	5.8	0.2	2.4	2.0	2.9	1.8	1.5	2.2
Any Alcohol Use Disorder	7.3	0.8	2.3	0.1	3.3	2.6	4.3	2.3	1.8	3.1
Alcohol Abuse	3.5	0.6	1.2	0.1	3.0	2.1	4.4	2.3	1.6	3.5
Alcohol Dependence	6.0	0.9	1.6	0.1	4.0	2.8	5.6	2.7	1.8	3.9
Any Drug Disorder	2.7	0.5	0.4	0.1	6.3	4.0	9.8	3.8	2.3	6.1
Drug Abuse	1.7	0.4	0.2	0.0	7.6	4.2	13.6	4.6	2.4	8.8
Drug Dependence	1.4	0.4	0.2	0.0	5.7	2.9	11.1	3.3	1.6	6.7
Nicotine Dependence	7.7	1.2	4.3	0.2	1.9	1.3	2.6	1.5	1.1	2.1
Any Mood Disorder	4.3	0.6	1.7	0.1	2.6	1.9	3.5	2.0	1.4	2.7
Major Depressive Disorder	3.0	0.6	1.3	0.1	2.3	1.5	3.6	1.8	1.2	2.8
Bipolar I	1.6	0.4	0.5	0.1	3.5	2.1	5.9	2.5	1.4	4.2
Bipolar II	0.7	0.3	0.2	0.0	3.8	1.5	10.0	2.6	1.0	6.5
Any Anxiety Disorder	6.6	0.7	2.5	0.1	2.8	2.1	3.6	2.1	1.6	2.8
Panic disorder	1.6	0.4	0.6	0.1	2.8	1.6	4.9	2.2	1.3	3.8
Social Anxiety Disorder	0.5	0.2	0.3	0.0	2.0	0.9	4.2	1.5	0.7	3.2
Specific Phobia	0.7	0.3	0.4	0.1	1.7	0.7	3.8	1.3	0.5	3.1
Posttraumatic Stress Disorder	2.8	0.6	0.8	0.1	3.9	2.4	6.2	2.9	1.8	4.7
Generalized Anxiety Disorder	3.5	0.6	1.0	0.1	3.7	2.5	5.6	3.0	2.0	4.4

*Reference group

**Adjusted for race, age, education, individual income, family income, employment status, marital status and sexual-orientation

Appendix Material: Table 1

12-month prevalence of intimate partner violence stratified by sociodemographic characteristics

	Intimate partner violence past 12 months				95%CI	
Group	**Sample Size (N)**	**Prevalence of Intimate partner violence**	**SE**	**OR**		
Total	25,626	5.6	0.2	N/A		
Sex						
Male*	11,783	5.8	0.3	1.0	1.0	1.0
Female	13,843	5.5	0.2	0.9	0.8	1.1
Race/Ethnicity						
White*	15,193	4.6	0.2	1.0	1.0	1.0
Black	4,274	10.5	0.7	2.4	2.1	2.8
Native American	429	8.1	1.4	1.8	1.2	2.7
Asian	762	4.7	1.2	1.0	0.6	1.8
Hispanic	4,968	7.8	0.5	1.8	1.5	2.1
Nativity						
US-born*	21,501	5.6	0.2	1.0	1.0	1.0
Foreign-born	4,125	5.8	0.5	1.0	0.9	1.3
Age						
18–29*	4,023	9.5	0.6	1.0	1.0	1.0
30–44	9,010	7.3	0.3	0.7	0.6	0.9
45–64	9,022	4.0	0.3	0.4	0.3	0.5
65+	3,571	1.6	0.3	0.2	0.1	0.2
Education						
< High School	3,402	7.4	0.5	1.4	1.2	1.7
High School	5,849	5.7	0.4	1.1	0.9	1.3
College*	16,375	5.3	0.2	1.0	1.0	1.0
Individual Income						
0–19,000*	10,138	6.6	0.3	1.0	1.0	1.0
20–34,000	6,044	6.1	0.4	0.9	0.8	1.1
35–69,000	6,659	4.8	0.3	0.7	0.6	0.8
>70,000	2,785	3.5	0.5	0.5	0.4	0.7

Group	Intimate partner violence past 12 months				95%CI	
	Sample Size (N)	Prevalence of Intimate partner violence	SE	OR		
Family Income						
0–19,000*	4,077	8.9	0.5	1.0	1.0	1.0
20–34,000	4,902	6.8	0.4	0.8	0.6	0.9
35–69,000	8,742	5.3	0.3	0.6	0.5	0.7
>70,000	7,905	4.0	0.3	0.4	0.4	0.5
Employment Status						
Employed*	17,826	5.9	0.2	1.0	1.0	1.0
Unemployed	7,460	5.0	0.3	0.9	0.7	1.0
Student	340	7.5	1.5	1.3	0.8	2.0
Marital Status						
Married/Cohabiting*	18,725	4.7	0.2	1.0	1.0	1.0
Widowed/Separated/Divorced	3,211	9.6	0.7	2.2	1.8	2.6
Never Married	3,690	9.1	0.6	2.1	1.8	2.4
Urbanicity						
Urban*	21,550	5.7	0.2	1.0	1.0	1.0
Rural	4,076	5.2	0.4	0.9	0.8	1.1
Region						
Northeast	4,489	5.8	0.4	1.0	0.8	1.3
Midwest	4,866	6.0	0.4	1.1	0.9	1.3
South	9,686	5.4	0.3	1.0	0.8	1.1
West*	6,585	5.7	0.4	1.0	1.0	1.0
Insurance						
Private*	20,176	4.7	0.2	1.0	1.0	1.0
Public	2,508	9.6	0.7	2.2	1.8	2.6
No insurance	2,942	9.7	0.7	2.2	1.8	2.6
Sexual Orientation						
Heterosexual*	25,147	5.6	0.2	1.0	1.0	1.0
Non-Heterosexual	445	8.2	1.5	1.5	1.0	2.2

*Reference group

Appendix Material: Table 2

Frequency of types of violence among intimate partner violence victims during the past 12 months, total and by sex

	Total (N=1608)		Female (N=890)		Male* (N=718)		OR % (95%CI)		
	%	SE	%	SE	%	SE			
Pushed, grabbed, shoved	88.5	1.0	88.1	1.4	88.9	1.3	0.9	0.6	1.4
Slapped, kicked, bitten, hit	42.7	1.5	38.6	1.9	46.4	2.3	0.7	0.6	0.9
Threatened with a weapon (knife, gun)	10.2	0.9	9.4	1.2	10.9	1.3	0.9	0.6	1.3
Cut or bruised	17.7	1.2	21.6	1.7	14.1	1.7	1.7	1.2	2.4
Forced to have sex	12.5	1.1	17.2	1.7	8.3	1.1	2.3	1.6	3.3
Injured enough to get medical care	6.6	0.9	8.1	1.2	5.3	1.1	1.6	0.9	2.7
Victim was drinking at that time	19.5	1.7	15.3	1.8	24.8	3.0	0.6	0.4	0.8
Partner was drinking at that time	28.9	1.6	33.7	2.1	24.5	2.1	1.6	1.2	2.1

*Reference group

Appendix Material: Table 3

Incidence of psychiatric disorders by type and frequency of intimate partner violent act

	Any mood disorder (n=544)			Any anxiety disorder (n=819)			Any substance use disorder (n=1,552)		
	OR	95% CI		OR	95% CI		OR	95% CI	
Push, grave, shove									
Never	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Once	1.8	1.0	3.1	2.2	1.5	3.2	2.3	1.7	3.1
2–3 times	3.4	2.1	5.5	2.6	1.7	4.0	2.8	2.1	3.7
Once or more in a month	4.6	2.3	9.3	4.6	2.4	8.7	3.6	2.1	6.3
Slap, kick, bite, hit									
Never	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Once	3.8	2.1	6.8	2.5	1.6	4.0	2.2	1.5	3.2
2–3 times	3.5	1.8	6.8	2.3	1.3	4.1	3.5	2.3	5.4
Once or more in a month	8.0	3.4	18.8	6.6	3.0	14.6	4.5	2.1	9.7
Threaten with a weapon									
Never	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Once	1.5	0.5	4.7	2.4	1.1	5.2	2.5	1.4	4.2
2–3 times	2.7	0.6	12.2	4.4	1.5	13.4	8.7	3.0	25.7
Once or more in a month	8.9	1.6	48.7	7.5	1.7	33.2	3.5	0.7	16.4
Cut, bruise									
Never	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Once	2.8	1.2	6.3	2.4	1.3	4.5	2.4	1.5	4.1
2–3 times	6.7	2.7	16.8	7.7	3.1	19.1	6.4	2.9	13.8
Once or more in a month	7.7	2.4	25.1	8.1	2.8	23.6	4.6	1.7	12.2
Force to have sex									
Never	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Once	1.2	0.3	4.1	1.6	0.7	3.8	1.0	0.4	2.5
2–3 times	4.1	1.2	13.2	4.9	2.1	11.4	1.9	0.7	4.9
Once or more in a month	2.2	0.5	9.7	0.8	0.2	2.7	2.5	1.0	6.5
Injure enough to get medical care									
Never	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Once or more	1.7	0.5	5.1	3.3	1.8	6.0	2.5	1.3	4.8

Respondents were asked the frequency of the acts during the previous year (1) never, 2) once, 3) two or three times, 4) once a month, or 5) more than once a month). To minimize the presence of sparse cells in the statistical analyses, the last two categories were collapsed for all analyses, except for "having been injured enough to get medical care" in which case the categories were dichotomized (never versus once or more).