



Published in final edited form as:

Psychiatr Serv. 2010 October ; 61(10): 1018–1023. doi:10.1176/appi.ps.61.10.1018.

Assault and Mental Disorders: A Cross-Sectional Study of Urban Adult Primary Care Patients

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Abstract

Objective—This study estimated the strength of associations between self-reported assault and psychiatric disorders among low-income, urban primary care patients who were predominantly female.

Methods—A sample of adult patients who consecutively presented at an urban primary care practice completed the Life Events Checklist (N=1,157). They were also screened for current major depression, panic disorder, generalized anxiety disorder, and substance use disorders with the Primary Care Evaluation of Mental Disorders Patient Health Questionnaire; for bipolar disorder with the Mood Disorder Questionnaire; and for posttraumatic stress disorder (PTSD) with the PTSD Checklist–Civilian Version. A total of 977 of the respondents reported whether they had ever experienced an assault. Logistic regression was used to model associations between self-reported assault and screen status, controlling for relevant sociodemographic and clinical characteristics.

Results—Twenty-five percent of study participants endorsed a history of physical or sexual assault. Compared with patients without a history of assault, patients with a history of assault had significantly greater odds of screening positive for PTSD (odds ratio [OR]=1.97, 95% confidence interval [CI]=1.19–3.25), alcohol use disorder (OR=2.17, CI=1.07–4.41), and drug use disorder (OR=3.38, CI=1.14–9.98).

Conclusion—A history of assault was related to risk of screening positive for PTSD and a substance use disorder. These findings support assessment of trauma history among low-income primary care patients.

disclosures The other authors report no competing interests.

Risk of physical and sexual assault varies by sociodemographic factors, such as gender and race or ethnicity (1). According to estimates from one study of 16,005 community-dwelling adults, approximately one-half of U.S. women and nearly two-thirds of men were physically assaulted during childhood, and 17.6% of the women reported that they had been the victim of a completed or attempted rape at some time in their life (2). A substantial proportion of the U.S. population has dealt with violence in childhood, adulthood, or both (2).

In the psychiatric literature, the role of assault has been most extensively studied in relation to posttraumatic stress disorder (PTSD). In community (3,4) and clinical (5,6) populations rape and physical assault are strongly correlated with PTSD, and among psychiatric outpatients assault has been linked to increased anxiety and depressive symptoms (6,7).

The association between rape and mental disorders other than PTSD has been assessed in various clinical settings. In one study of urban psychiatric outpatients, women with a history of sexual assault were more likely than those with no history of assault to have problematic alcohol drinking. A history of sexual assault has also been related to an increased risk of lifetime suicide attempt (8). However, the direction of causality is difficult to determine in cross-sectional and retrospective studies because women with mental illness are more vulnerable to sexual assault (9).

Little is known about relationships between nonsexual assault and mental disorders in primary care populations. In a study of female primary care patients, a history of domestic violence significantly increased the likelihood of meeting criteria for PTSD, depressive disorder, suicide attempt, and illicit drug use (10). A history of rape in adulthood also increased the odds of depression, PTSD, and suicide attempt.

Associations between history of assault and current mental disorders in urban, low-income, minority populations have not been well characterized (11). The analysis presented here sought to address this issue in a predominantly Dominican population. The sample was drawn from a general internal medicine practice that serves a predominantly Hispanic urban population in the Washington Heights section of New York City.

Methods

The study was conducted at the Associates in Internal Medicine (AIM) practice of New York–Presbyterian Hospital (Columbia University Medical Center) in New York City between December 2001 and January 2003. AIM is the faculty and resident group practice of the Division of General Medicine at the College of Physicians and Surgeons of Columbia University Medical Center. AIM provides primary care to approximately 18,000 adult patients from the surrounding northern Manhattan community each year.

The institutional review boards of the Columbia Presbyterian Medical Center and the New York State Psychiatric Institute approved the study protocol, including the Spanish translation of data forms. All participants provided informed consent.

Participant eligibility

A systematic sample of adult patients seeking primary care who consecutively presented to the AIM practice was invited to participate. Eligible patients were aged 18 to 70 years, had made at least one prior visit to the practice, could speak and understand Spanish or English, and were waiting for a scheduled face-to-face contact with their primary care physician. Patients were excluded from the study if their current health status prohibited completion of the survey forms.

Assessment of sociodemographic and clinical characteristics

The survey forms were translated from English to Spanish and back-translated by a bilingual team of mental health professionals.

All participants completed a sociodemographic history form to assess age, sex, race or ethnicity, marital status, educational achievement, and annual household income.

The Primary Care Evaluation of Mental Disorders (PRIME-MD) Patient Health Questionnaire (PHQ) (12), which uses diagnostic criteria from the *DSM-IV*, was used to assess current symptoms of major depression, panic disorder, generalized anxiety disorder, and past-year alcohol use disorder. Drug use disorders were assessed with a module patterned after the PRIME-MD alcohol use disorder module. PTSD was assessed with the PTSD Checklist–Civilian Version (13).

Participants also completed the Mood Disorder Questionnaire (14). Participants who endorsed seven or more total lifetime manic symptoms with two or more co-occurring symptoms resulting in moderate or serious functional impairment were characterized as having a history of bipolar disorder (12). Among participants who screened positive for having current major depression on the PRIME-MD PHQ, those with a history of bipolar disorder were classified as having current bipolar depression and those without a history of bipolar disorder were classified as having current unipolar depression.

A 19-item set of questions from the Life Events Checklist (LEC) (4) was used to assess lifetime history of stressful events. Three of these questions were used to create an “assault” variable. These questions asked about lifetime history of physical assault (“for example, being attacked, hit, slapped, kicked, or beaten up”), assault with a weapon (“for example, being shot, stabbed, or threatened with a knife, gun, or bomb”), and sexual assault (“rape, attempted rape, made to perform any type of sexual act through force or threat of harm”). If a participant endorsed any of these three questions with a response of “[It] happened to me,” she or he was considered to have a lifetime history of assault. Lifetime history of nonassaultive trauma was ascertained by a response of “[It] happened to me” or “[I] witnessed it” to any of the LEC items denoting nonassaultive events, such as natural disaster, fire or explosion, exposure to toxin, combat or captivity, transportation and other serious accidents, life-threatening illness or injury to self or family member, and sudden violent death or unexpected death of someone close.

Recruitment

A total of 3,807 patients were approached, of whom 169 (4%) refused solicitation. Of the 3,638 who were prescreened, 2,291 (63%) were ineligible to participate. Inclusion criteria most frequently unmet were not being scheduled for a visit with a primary care physician (N=1,294, 56%), not being between 18 and 70 years old (N=767, 33%), and not having made a previous visit to the practice (N=382, 17%). It was less common for patients to be excluded because they were unable to complete the survey forms because of poor physical health (N=76, 3%) or cognitive impairment (N=37, 2%). Of the 1,347 who met eligibility criteria, 1,157 (86%) consented to participate, and of these, 977 (85%) provided sufficient information to be classified with respect to history of assault.

Analytic strategy

Patients were first partitioned on the basis of a lifetime history of assault. The two patient groups were compared with respect to sociodemographic characteristics, and mental disorders. Comparisons between patient groups on categorical variables were made with the chi square test. Logistic regression analyses were used to examine the associations of each

mental disorder with lifetime assault while controlling for selected sociodemographic characteristics and comorbid diagnoses. The alpha value was set at .05 (two-tailed).

Results

Background characteristics

Seventy percent of the respondents were women. A majority of respondents were Hispanic (83%), of whom 638 (65%) identified as Dominican and 91 (9%) identified as Puerto Rican. The mean±SD age of respondents was 50±12 years. A majority of participants (63%) had completed at least some or all of high school. Eighty-five percent had been in this country for over ten years at the time of this study. The annual family income of the majority of participants (75%) was below \$12,000. Nearly one-half (44%) of all respondents were separated or divorced, and one-third (32%) were married or cohabiting (Table 1).

A total of 331 participants screened positive for having at least one of the mental disorders described above. Sixteen percent met screening criteria for current major depressive disorder. Less common were PTSD (12%) and generalized anxiety disorder (11%). Other current disorders and symptoms included alcohol or drug use disorder (N=75, 8%), bipolar depression (5%) and panic disorder (4%) (Table 2).

Sociodemographic characteristics of patients with a history of assault

Twenty-five percent of the respondents reported a history of assault, defined as physical assault, sexual assault, or assault with a weapon. The most common form of assault was having been hit, slapped, kicked, or beaten up (N=164, 17%), followed by being attacked with a weapon (N=158, 16%) and sexual assault (N=64, 7%). Several participants (N=145, 15%) endorsed more than one type of assault.

As shown in Table 1, there was a higher proportion of men in the assault group than in the nonassault group (35% versus 29%), although this finding was not significant ($p=.06$). In addition, compared with the nonassault group, the assault group had a significantly greater proportion of respondents who had been living in the United States for more than ten years (90% versus 83%) ($p=.009$), who were between the ages of 45 and 54 years (37% versus 28%) ($p=.03$), who were from the United States (29% versus 16%) ($p<.001$), who were white (6% versus 4%) or African American (17% versus 11%) ($p=.008$), and who had a history of any nonassaultive trauma (89% versus 61%) ($p<.001$).

Clinical characteristics of patients with a history of assault

The assault group differed significantly from the nonassault group with respect to several clinical characteristics. Patients with a history of assault were significantly more likely than their counterparts without such a history to meet criteria for PTSD, a recent episode of major depression or bipolar depression, generalized anxiety disorder, and alcohol and drug use disorders (Table 2).

Multivariate models

Logistic regressions were conducted to examine the strength of association between a history of assault and the various mental disorders. For each disorder, separate models were constructed to control for background characteristics and then to additionally control for comorbid mental disorders. In models that adjusted for background characteristics and comorbid disorders, a history of assault remained significantly related to PTSD and alcohol and drug use disorders (Table 3). Of the 127 participants who had a history of assault and a current mental disorder, 83 (65%) had received some kind of psychiatric treatment at some point in their lives.

Discussion

Twenty-five percent of a sample of adult primary care patients who consecutively presented to an urban group general medical practice reported a lifetime history of assault. This is somewhat lower than rates from earlier studies: 38% (15) and 52% (2). Differences in demographic composition may account for the differing assault rates between the studies. Although our sample was predominantly older women of Hispanic ancestry, the two previous studies had samples that were predominantly young adult males who were white, non-Hispanic. Breslau and colleagues (15) demonstrated that men, the young, and members of ethnic and racial minority groups residing in urban areas have higher lifetime risk of exposure to assaultive violence, compared with women, older persons, and residents of middle-class communities.

In the study presented here, there were significant relationships between a history of assault and positive screens for mental disorders. The mental disorders that bore the strongest unique associations with a history of assault were substance use disorders and PTSD. The interpretation of these correlations should take into account the cross-sectional design.

A cross-sectional assessment of mental disorder with a retrospective assessment of assault raises questions concerning the direction of causality. It was not possible to establish through this study whether patients with an assault history were at greater risk of a mental disorder or whether they had a preexisting mental disorder that could have predisposed them to subsequent assault. For example, a participant with a substance use disorder could be at greater risk of assault when under the influence of drugs or alcohol. Drug use has been associated with anger, impulsivity, and violence (16,17). Illegal drug use can lead to violent behavior as a result of irritability from drug withdrawal, and decreased vigilance of the user may increase risk of victimization (18).

The study results have important implications for the delivery of primary care and specialty mental health services to urban, low-income, ethnic minority primary care populations. Strong associations between assault and mental disorders suggest that a history of assault should alert primary care clinicians in these settings to an increased risk of several mental disorders. Yet, because the average internal medicine office visit lasts just 21.5 minutes (19), the pace of primary care practice likely affords few opportunities to perform detailed mental health assessments or inquire about recent assault or other traumatic events.

Brief screening instruments for common mental disorders (20–22) can simplify the preliminary evaluation of mental health problems in primary care. Screening alone, however, is unlikely to improve patient outcomes. Greater collaboration is needed between primary care physicians and specialty mental health professionals. In a recent survey, approximately two-thirds of primary care physicians reported that they could not get outpatient mental health care for their patients with mental health problems (23). In fact, barriers to accessing medical services are approximately twice as common for mental health care as they are for other types of medical services (23).

Development of referral networks and close collaborative relationships between primary care physicians and mental health specialists may be needed to smooth the transition of high-risk patients into specialty mental health care. Collaborative care (24) offers one promising model for delivering mental health services to primary care patients who are victims of assault. It involves a nurse practitioner or case manager who assists with the management of mental health problems through structured delivery of interventions, mechanisms to foster communication between primary care clinicians and mental health specialists, and collection and sharing of information on patient progress.

The observation that lifetime history of assault significantly increased the risk of PTSD and substance use disorders suggests that consideration should also be given to brief self-report screens for history of assault (25,26) during the intake process at primary care services for low-income populations. In many practice settings, however, such screening may not be feasible because of competing demands for other aspects of the assessment. Previous research suggests that most female primary care patients are not routinely assessed for abuse. Only 7% to 28% of female patients report being asked about abuse by health care professionals (27,28). According to one estimate, the average primary care physician would need to devote over seven hours of every working day just to deliver existing federally recommended screening and preventive services (29). Because of the unlikelihood that screening for trauma will become standard in primary care in the near future, primary care physicians should remain alert for clinical indications of recent trauma. These may include multiple unexplained physical problems, persistent physical pain, or symptoms of irritable bowel (30,31).

This study has several limitations. As indicated, given the cross-sectional design, it is not possible to establish a causal link between a history of assault and development of the mental disorders. We also could not quantify the frequency or duration of participants' sexual or physical assault. These factors could undoubtedly influence the existence and severity of mental disorders. Survey nonresponse may have introduced selection biases that influence the strength of associations between a history of assault and mental disorders. The study sample was limited to patients aged 18–70 years who were waiting for a scheduled appointment with a primary care physician. The practice does not treat adolescents, and the psychometric properties of the mental health screens are less well established among older adults. The requirement for direct clinical contact follows our interest in patients who receive clinical attention. Because the study population was limited to mostly poor, urban, nonelderly Hispanic women with little education, the results may not generalize to other primary care populations or to the surrounding community population. The study population was limited to returning patients; therefore, results may not generalize to first-visit patients, who are logical candidates for lifetime trauma history assessments.

Rates of mental disorders were based on self-report screens, not on structured diagnostic interviews, which have greater validity. Differences between the assault and nonassault groups could be explained by other confounders—for example, other unmeasured traumas besides assault. Additionally, with the exception of bipolar disorder, current symptoms, not lifetime symptoms, of mental disorders were assessed. This could have excluded patients who may have had already resolved past episodes of depression that may have been correlated with a history of assault.

Conclusions

Much remains to be learned about the complex associations between a history of assault and risk of mental disorders. Without prospective, longitudinal research, it is not possible to establish causal links and mediating factors that connect assault to risk of specific mental disorders. The existing associations, however, suggest that detection of a history of assault may help primary care physicians focus their clinical attention on the mental health and emotional well-being of some of their most vulnerable patients.

Acknowledgments

Partial support for this study was provided by grant 1R01-MH072833 from the National Institute of Mental Health (Dr. Neria). Dr. Olfson has research grants through Columbia University sponsored by Eli Lilly and Company and Bristol-Myers Squibb.

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Table 1

Background characteristics of adult primary care patients, by history of assault^a

Characteristic	All patients (N=977)		History of assault (N=241)		No history of assault (N=736)		χ ²	df	p
	N	%	N	%	N	%			
Gender							3.4	1	.06
Female	683	70	157	65	526	71			
Male	294	30	84	35	210	29			
Age							9.3	3	.03
18-44	267	27	60	25	207	28			
45-54	296	30	89	37	207	28			
55-64	271	28	67	28	204	28			
65-70	143	15	25	10	118	16			
Education							3.4	2	.19
Up to 8th grade	363	38	78	33	285	39			
Some or all of high school	395	41	103	43	292	40			
Some or all of college	210	22	58	24	152	21			
Annual household income							.5	2	.76
\$11,999	730	75	182	76	548	75			
\$12,000-\$17,999	136	14	30	13	106	15			
\$18,000	103	11	26	11	77	11			
Years in United States							6.8	2	.009
0-10	143	15	23	10	120	17			
>10	821	85	216	90	605	83			
Country of birth							21.0	2	<.001
Dominican Republic	627	64	128	53	499	68			
United States	189	19	69	29	120	16			
All other countries	161	16	44	18	117	16			
Race or ethnicity							9.7	2	.008
Hispanic	810	83	184	76	626	85			
Non-Hispanic black	124	13	42	17	82	11			
Non-Hispanic white or other	43	4	15	6	28	4			

Characteristic	All patients (N=977)		History of assault (N=241)		No history of assault (N=736)		χ^2	df	p
	N	%	N	%	N	%			
Marital status							3.3	3	.35
Married or cohabiting	308	32	66	28	242	33			
Separated or divorced	425	44	113	47	312	43			
Widowed	69	7	15	6	54	7			
Never married	172	18	46	19	126	17			
Nonassaultive trauma ^b							61.1	1	<.001
Any	654	68	211	89	443	61			
None	305	32	27	11	278	39			

^aNot all data were available for all persons.

^bPositive if respondents indicated that any nonassaultive trauma event from the Life Events Checklist ever “happened to me” or “[I] witnessed it.”

Table 2

Psychiatric diagnoses of adult primary care patients, by history of assault^a

Current mental disorder or symptom	All patients (N=977)		History of assault (N=241)		No history of assault (N=736)		χ ²	df	p
	N	%	N	%	N	%			
Mood disorder									
Bipolar depression	47	5	24	10	23	3	18.7	1	<.001
Unipolar depression	158	16	49	21	109	15	4.2	1	.04
Anxiety disorder									
Panic disorder	39	4	13	5	26	4	1.6	1	.20
Generalized anxiety disorder	108	11	43	18	65	9	15.2	1	<.001
Posttraumatic stress disorder	109	12	50	21	59	8	28.5	1	<.001
Substance use disorder									
Alcohol use disorder	67	7	37	16	30	4	35.6	1	<.001
Drug use disorder	26	3	20	8	6	1	39.2	1	<.001

^aNot all data were available for all persons.

Table 3
Association between history of assault and current psychiatric diagnosis among adult primary care patients

Current diagnosis	Crude ^d			Adjusted for background variables ^b			Adjusted for background variables and comorbid disorders ^c		
	OR	95% CI	p	OR	95% CI	p	OR	95% CI	p
Mood disorder									
Bipolar depression	3.14	1.72–5.72	<.001	2.42	1.27–4.61	.007	1.38	.63–3.05	.42
Unipolar depression	1.39	.94–2.06	.10	1.27	.83–1.93	.27	1.00	.61–1.65	.99
Anxiety disorder									
Panic disorder	1.62	.79–3.34	.19	1.40	.65–3.02	.39	.90	.38–2.14	.82
Generalized anxiety disorder	2.26	1.47–3.49	<.001	2.33	1.45–3.76	.001	1.72	.97–3.03	.06
Posttraumatic stress disorder	2.79	1.83–4.25	<.001	2.56	1.62–4.05	<.001	2.10	1.27–3.46	.004
Substance use disorder									
Alcohol use disorder	3.88	2.25–6.71	<.001	3.45	1.81–6.57	<.001	2.16	1.03–4.53	.04
Drug use disorder	10.59	4.19–26.74	<.001	7.35	2.59–20.90	<.001	4.47	1.31–15.32	.02

^aIn each row, the crude odds ratio is equal to the crude odds of having the diagnosis for those with a history of assault, divided by the crude odds of having the diagnosis for those without a history of assault.

^bAnalysis is adjusted for patient background characteristics with at least marginally significant ($p < .10$) bivariate associations with assault history, specifically, age (18–44 versus 45–54 versus 55–64 versus 65–70), gender (male versus female), race or ethnicity (Hispanic versus black, non-Hispanic versus white or other, non-Hispanic), country of origin (Dominican Republic versus United States versus other), length of time in the United States (0–10 years versus >10 years), and history of nonassaultive trauma (1, present; 0, absent).

^cAnalysis is adjusted for all of the background variables described in footnote b and for each of the other six diagnoses listed in the first column (each entered as a dichotomous independent variable: 1, present; 0, absent).