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### Title

Traumatic life events in primary care patients: a study in an ethnically diverse sample.

### Permalink

<https://escholarship.org/uc/item/0t12b51m>

### Journal

Archives of family medicine, 9(9)

### ISSN

1063-3987

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### Publication Date

2000-09-01

### DOI

10.1001/archfami.9.9.802

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Peer reviewed

# Traumatic Life Events in Primary Care Patients

## *A Study in an Ethnically Diverse Sample*

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**Objective:** To examine among immigrants and others seeking primary care: (1) the prevalence, types, and predictors of traumatic life events; and (2) the relations among traumatic life events, psychiatric disorders, and utilization of primary care services.

**Design:** Survey with structured diagnostic interview.

**Setting:** Community-based, university-affiliated primary care clinic in southern California.

**Participants:** Fourteen hundred fifty-six adult patients representing 4 ethnic groups (Mexican immigrants, Central American immigrants, US-born Latinos of Mexican descent, and US-born non-Latino whites).

**Dependent Measures:** Rates of traumatic events measured with the Posttraumatic Stress Disorder section of the Diagnostic Interview Schedule; psychiatric disorders identified by the Composite International Diagnostic Interview using *Diagnostic and Statistical Manual of Mental Disorders, Revised Third Edition* criteria; physical functioning (Short Form Health Survey); and the number of medical clinic visits during a 6-month period.

**Results:** Nearly 10% of patients had experienced a traumatic event in the previous year, and 57% had experi-

enced at least 1 during their lifetimes. The most common forms of trauma were interpersonal violence occurring outside the family (21%), acute losses or accidents (17%), witnessing death or violence (13%), and domestic violence (12%). When compared with the US-born non-Latino whites, Mexican immigrants were half as likely, and Central American immigrants were 76% more likely, to report having experienced a traumatic event. Married individuals were significantly less likely to report traumas. Traumatic experiences, female gender, and non-Latino ethnicity were associated with the presence of a psychiatric disorder. One-year and lifetime psychiatric disorders were associated with poorer physical functioning and an increased number of clinic visits during a 6-month period.

**Conclusions:** Traumatic life events are common and associated with psychiatric disorders other than posttraumatic stress disorder in an ethnically diverse sample of primary care patients. Psychiatric disorders, in turn, are strongly associated with poor physical functioning and higher rates of primary care utilization. Screening for traumatic experiences should accompany assessments of psychiatric disorders to ensure adequate treatment of patients seeking primary care services.

*Arch Fam Med.* 2000;9:802-810

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RECENT WAVES of immigration to the United States have ensured that health care professionals will be asked to provide social, physical, and mental health services for a growing number of individuals from diverse cultural and ethnic backgrounds.<sup>1-4</sup> A substantial proportion of these individuals are likely to have encountered traumatic experiences, either in their country of origin, during the process of migration, or during the postmigration period.<sup>5-8</sup> Recently, several studies have addressed the psychological consequences of experiencing traumatic life events among immigrants,

refugees, and others, demonstrating that specific types of trauma are associated with high rates of posttraumatic stress disorder (PTSD), depression, and other psychiatric disorders.<sup>9-24</sup>

At the same time, a growing body of research has documented that many pri-

*For editorial comment  
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mary care patients suffer from psychiatric disorders that increase the utilization and cost of medical services and diminish the quality of their lives.<sup>25-33</sup> Unfortunately, these studies have neglected to assess rates

## PARTICIPANTS AND METHODS

### SUBJECT RECRUITMENT AND PROCEDURES

Participants were recruited from the population of new patients seeking primary care services at a community-based, university-affiliated clinic in southern California. Eligibility for participation in the study was determined by a brief screening process that identified demographic characteristics (eg, ethnicity, age, and immigration status) for all new adult patients visiting the clinic. Eligible patients were those individuals aged 18 years or older who identified themselves as being from 1 of the 4 main ethnic groups that were represented in the community (US-born non-Latino whites, US-born Latinos of Mexican descent, Mexican immigrants, and Central American immigrants).

Between February 1993 and October 1994, interviewers approached 2916 eligible patients, of whom 1469 (50%) agreed to participate in our research. These patients signed an informed consent form in either Spanish or English. The Human Subjects Institutional Review Board at the University of California, Irvine, approved the project and consent forms.

The findings reported in this article reflect data from the 1456 respondents for whom complete data were available. The sample size for this study allowed detection of small to moderate effects with a 2-tailed significance level of .05 and power of .80.

### THE INTERVIEW

The structured interview included sections from the Composite International Diagnostic Interview (CIDI)<sup>47</sup> version I, a measure specifically designed by the World Health Organization and the US Alcohol, Drug Abuse and Mental

Health Administration to serve in cross-cultural studies of psychopathology. It can identify patients who meet criteria for both *Diagnostic and Statistical Manual of Mental Disorders, Revised Third Edition (DSM-III-R)* and *International Classification of Diseases, 10th Revision (ICD-10)* diagnoses, and has been tested extensively for its reliability and validity in several languages and countries.<sup>48</sup>

In addition, patients completed a modified version of the National Institute of Mental Health Diagnostic Interview Schedule (DIS) section assessing traumatic experiences and PTSD, since no comparable section existed in the CIDI at the time the study was conducted.<sup>49</sup> In this section, respondents were asked if they had ever been directly exposed to or witnessed an extreme stressor involving death, serious injury, or threat to the physical integrity of oneself or another (eg, physical or sexual assault, natural disaster, serious accident, torture). Non-immigrants were asked to report up to 3 such experiences; immigrants were asked to report the experience of such stressors before, during, and after immigrating to the United States.

Bilingual/bicultural (English/Spanish) interviewers were trained in accordance with the official CIDI training guidelines developed in the Department of Psychiatry at Washington University, St Louis, Mo. All instruments were translated, back-translated, pretested, and adapted for use with Mexican and Central American Spanish-speaking patients. The interviews were conducted in the patient's preferred language, and in close temporal proximity to the first physician visit.

### Traumatic Life Events

Data from the DIS trauma and PTSD section were used to calculate rates of lifetime and recent (previous year) trauma.

Continued on next page

of traumatic experiences, even though research suggests that some traumatized individuals (eg, war veterans<sup>22,24</sup> and refugees<sup>5,34,35</sup>) report high levels of psychiatric and physical disability, and other research shows that some responses to trauma (eg, PTSD) are associated with physical health complaints.<sup>22,23</sup> The failure to consider the prevalence of traumatic life events and their role in the overall well-being of primary care patients is surprising, given that recent epidemiologic studies indicate that traumatic experiences are more common in the general population than previously thought, and that such events may trigger the onset of some psychiatric disorders.<sup>36,37</sup> The few studies that have assessed trauma in primary care have involved small samples of patients who either have specific medical diagnoses,<sup>38-40</sup> or have experienced specific types of trauma (eg, sexual victimization, torture), to the exclusion of patients with other diagnoses or patients who have experienced other types of trauma.<sup>19,41-45</sup>

Thus, little is known about the general rates or types of traumatic experiences encountered by immigrants and other primary care patients. Given the high risk among immigrants of exposure to traumatic events, and the recent trends in immigration, it is likely that primary care providers will encounter more patients who have experienced a traumatic life event. A large proportion of people who experience traumatic life events are likely to be at risk for developing psychiatric disorders,<sup>46</sup> and these disorders are likely to negatively affect their physical functioning and may increase their utilization of primary care services. However, since immigration is shaped in part by the socioeconomic and political realities of the country from which one is emigrating, we would also anticipate interethnic differences in the rates of trauma reported by immigrants coming to the United States from different countries. The goals of the present study were thus to examine, among immigrants and others seeking primary care, (1) the rates and types of traumatic events experienced; (2) the demographic correlates

## Demographics and Socioeconomic Status

The CIDI includes assessments of participant age, gender, ethnicity, marital status, employment status, and the number of years of formal education completed. Recent employment history and the number of years of formal education were used to indicate participants' socioeconomic status (SES).

## Psychiatric Disorders

Five sections were drawn from the CIDI to assess the following psychiatric disorders for this study: somatoform disorders, mood disorders (eg, depression, dysthymia), generalized anxiety, panic, and phobias. Data from the CIDI and DIS PTSD sections were used to assign *DSM-III-R* diagnoses according to established computerized diagnostic algorithms.<sup>50</sup> Patients with medically unexplained symptoms were classified as "somatizers" if they met the abridged somatization criteria (ie, 4 unexplained somatic symptoms for men and 6 unexplained somatic symptoms for women), delineated by Escobar et al.<sup>51</sup> This abridged construct has been widely used to identify somatization in epidemiologic and clinical studies.<sup>52-54</sup> One-year and lifetime rates were calculated to represent the proportion of individuals who met criteria for a disorder in the previous year or at any point in their lives, respectively.

## Physical Functioning

Physical functioning was measured using the 10-item "physical functioning" subscale of the Short Form Health Survey,<sup>55</sup> which assesses limitations in physical health using a 3-point intensity scale.

## Utilization of Services

Utilization of medical services was operationally defined as the number of office visits made to the clinic during the 6 months following the initial intake interview. Two physicians independently reviewed each patient's medical record 6 months after the initial interview and counted the number of visits made during this interim period. Interrater agreement was 97%. Disagreements were negotiated by the physicians.

## STATISTICAL ANALYSES

The statistical analyses were designed to address (1) the prevalence of both lifetime and recent (previous year) traumatic life events; (2) the types of trauma reported; and (3) the correlates of trauma (eg, demographic characteristics, psychiatric disorders, physical functioning, and number of clinic visits). Hierarchical logistic regression analyses were conducted to identify the demographic and SES correlates of trauma, and to examine the relations between trauma and psychiatric disorders after adjusting for demographic characteristics and SES. Hierarchical multiple regression was then used to examine whether demographic characteristics, traumatic experiences, and psychiatric disorders were associated with physical functioning and utilization of medical services in the subsequent 6-month period. Statistical tests revealed that the assumptions regarding multicollinearity among independent variables were met in each of the analyses. All analyses were conducted a second time to assess the effect of insurance status and income on our findings, and neither variable had an effect on the results reported in this article.

of trauma, including interethnic differences in the rates of trauma; and (3) the degree to which trauma is associated with psychiatric disorders, physical functioning, and the utilization of primary care services.

## RESULTS

### ANALYSIS OF NONPARTICIPANTS

No significant differences were found between participants and eligible nonparticipants in age, gender, marital status, monthly income, or employment status. Patients who participated in the study, however, had completed an average of 1.1 more years of education than those who did not participate ( $t_{2649}=6.64$ ;  $P<.001$ ).

### CHARACTERISTICS OF THE SAMPLE

The demographic and socioeconomic characteristics of the sample are presented in **Table 1**. Participants ranged

in age from 18 to 66 years, with a mean of 36 years, and 55% were women. Thirty-nine percent of participants had not worked in the previous year. On average, participants had completed nearly 10 years of schooling, with 46% having completed high school and 24% having attended college. The sample was predominantly low-income, with 95% of those for whom data was available reporting a monthly income of \$1000 or less. Fifty percent of respondents had Medical Services for the Indigent coverage, 42% were self-pay clients, and 8% had MediCal (state-funded health care) coverage. The ethnic breakdown of the sample corresponded to that of the clinic's utilization patterns at the time of the study.

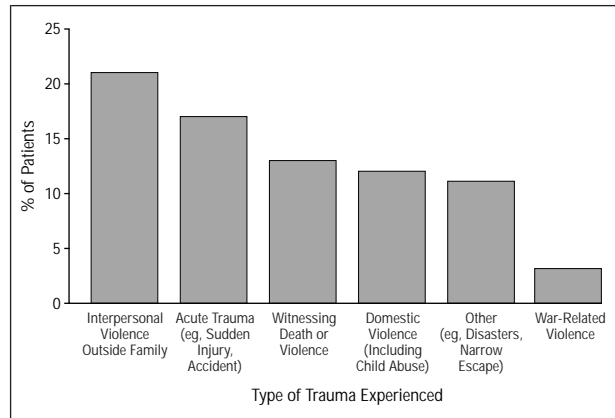
### RATES AND TYPES OF TRAUMATIC EXPERIENCES

The rates of traumatic experiences were quite high overall: 9.6% of the patients had experienced trauma

**Table 1. Demographic Characteristics of the Sample\***

	No. (%)
Age, y, mean (SD) [range]	36.4 (11.8) [18-66]
Gender	
Female	799 (54.9)
Male	657 (45.1)
Ethnicity	
Mexican immigrant	593 (40.7)
US-born non-Latino white	533 (36.6)
US-born Latino	205 (14.1)
Central American immigrant	125 (8.6)
Marital status (N = 1455)	
Single	556 (38.1)
Married	442 (30.3)
Divorced	269 (18.5)
Separated	142 (9.8)
Widowed	46 (3.2)
Employment status in the past year (N = 1450)	
Unemployed	565 (39.0)
Worked ≤6 mo	381 (26.2)
Worked ≥7 mo	504 (34.8)
Formal education (N = 1451)	
<grade school	210 (14.5)
Completed grade school	571 (39.4)
Completed high school	322 (22.2)
Attended college	348 (24.0)
Health insurance	
Medical Services for the Indigent	720 (49.5)
Self-pay	600 (41.2)
Medi-Cal	113 (7.8)
Unknown	23 (1.6)

\*Data are presented as number (percentage) unless otherwise indicated. Sample population was N = 1456.



Rates of traumatic life events (N=1456).

**Table 2. Rates of Traumatic Experiences by Type of Trauma and Ethnicity\***

Type of Traumatic Experience	US-Born Non-Latino	US-Born Latino	Mexican Immigrant	Central American Immigrant
Interpersonal violence outside family	26.5	26.8	14.3	20.8
Acute trauma	23.1	20.0	11.1	13.6
Domestic violence	19.5	16.1	4.9	3.2
Witnessed death or violence	11.6	21.0	11.0	16.0
War-related violence	2.6	0.0	0.0	17.6
Other	11.6	9.8	8.3	17.6

\*Numbers represent the percentage of individuals within each ethnicity that reported each type of traumatic experience. Some individuals reported more than 1 type of trauma so the column totals exceed the total percentage of individuals within each ethnicity who reported a traumatic experience.

in the prior year, and 57.2% had experienced trauma at some point in their lives. Respondents reported a variety of traumatic experiences (**Figure**). The most common forms reported were interpersonal violence outside of the family environment (eg, physical or sexual assault or being threatened with a weapon; 21% of entire sample, 37% of traumatized sample), acute trauma (eg, sudden injury or accident, news of a sudden death; 17% of entire sample, 30% of traumatized sample), witnessing death or violence (eg, seeing someone hurt or killed, seeing dead bodies; 13% of entire sample, 23% of traumatized sample), domestic violence (eg, physical or sexual assault within the family, child abuse and neglect; 12% of entire sample, 21% of traumatized sample), other forms of trauma (eg, disasters, narrow escape, unspecified threats, other's experiences; 11% of entire sample, 19% of traumatized sample), and war-related violence (eg, combat, war-related atrocities witnessed or experienced; 3% of entire sample, 4% of traumatized sample).

## DEMOGRAPHIC CORRELATES OF TRAUMATIC EVENTS

Rates of trauma varied by ethnicity, with the highest rates of trauma reported by the Central American immigrants (72% of the subsample) and the lowest rates reported by the Mexican immigrants (44% of the subsample). These interethnic differences were not consistent across all types of trauma, however (**Table 2**). Although Mexican immigrants did have the lowest rates for all types of trauma reported, Central American immigrants had the highest rates for witnessing death or violence and "other" forms of trauma only. In fact, the greatest interethnic difference was observed in the rates of domestic violence reported: both Mexican and Central American immigrants reported lower rates of domestic violence (4.9% and 3.2%, respectively) than the US-born Latinos and US-born non-Latino whites (16.1% and 19.5%, respectively).

As presented in **Table 3**, ethnicity was the strongest predictor of lifetime trauma. Mexican immigrants were 40%

**Table 3. Demographic Correlates of Experiencing Lifetime and Recent (Prior Year) Traumatic Experience in a Sample of 1456 Participants**

Predictor	Adjusted Odds Ratio (95% CI)*	
	Lifetime	Recent
Age, y		
<30 vs 30-40	1.10 (0.84-1.44)	0.80 (0.52-1.23)
<30 vs 40-50	1.30 (0.94-1.80)	0.65 (0.38-1.11)
<30 vs >50	0.91 (0.65-1.28)	0.29 (0.14-0.62)†
Gender‡	0.88 (0.70-1.10)	0.73 (0.50-1.05)
Ethnicity		
US-born whites vs US-born Latinos	1.19 (0.84-1.69)	1.06 (0.63-1.79)
US-born whites vs Mexican immigrants	0.60 (0.44-0.82)†	0.71 (0.43-1.19)
US-born whites vs Central American immigrants	1.76 (1.11-2.79)§	0.46 (0.19-1.10)
Marital status	0.68 (0.53-0.87)§	0.53 (0.44-0.88)§
Employment in past year		
None vs ≤6 mo	1.04 (0.79-1.38)	0.97 (0.61-1.54)
None vs ≥7 mo	1.19 (0.92-1.54)	1.05 (0.68-1.63)
Formal education		
<Grade school vs completed grade school	1.27 (0.90-1.81)	0.87 (0.46-1.63)
<Grade school vs completed high school	1.44 (0.94-2.22)	0.73 (0.35-1.52)
<Grade school vs attended college	1.45 (0.94-2.22)	0.46 (0.21-1.00)

\*The odds ratios are adjusted for all other variables in the analyses. CI indicates confidence interval.

†P<.001.

‡Gender is coded as 0 for men and 1 for women.

§P<.01.

||Marital status is coded 0 for unmarried and 1 for married.

less likely to report having a traumatic experience and Central American immigrants were 76% more likely to report having a traumatic experience than the US-born non-Latino whites. Married individuals were also significantly less likely to report having experienced either lifetime or recent traumatic events, and respondents aged 50 years or older were 71% less likely to report a recent trauma than respondents aged 30 years or younger.

### TRAUMATIC EXPERIENCES AND PSYCHIATRIC DISORDERS

Thirty-six percent of respondents met criteria for at least 1 psychiatric disorder in the prior year, and 49% met criteria for a disorder during their lifetime. Due to the high rates of co-occurrence found among the psychiatric disorders, the dependent measures represented the presence or absence of at least 1 one-year or lifetime DSM-III-R disorder other than PTSD. **Table 4** highlights the relationship between traumatic experiences and the presence of 1-year and lifetime psychiatric disorders, after ad-

**Table 4. Demographic Correlates of Lifetime and 1-Year Psychiatric Disorders in a Sample of 1456 Participants**

Predictor	Adjusted Odds Ratio (95% CI)*	
	Lifetime Disorder	1-Year Disorder
Age, y		
<30 vs 30-40	1.09 (0.83-1.43)	1.31 (0.97-1.76)
<30 vs 40-50	1.66 (1.21-2.28)†	1.70 (1.22-2.37)†
<30 vs >50	1.67 (1.19-2.36)†	1.37 (0.95-1.97)
Gender‡	1.53 (1.22-1.91)§	1.58 (1.24-2.02)§
Ethnicity		
US-born whites vs US-born Latinos	0.87 (0.61-1.22)	0.92 (0.63-1.30)
US-born whites vs Mexican immigrants	0.92 (0.67-1.27)	0.62 (0.44-0.88)†
US-born whites vs Central American immigrants	1.07 (0.69-1.65)	0.98 (0.62-1.53)
Marital status	0.87 (0.67-1.12)	0.89 (0.68-1.17)
Employment status		
None vs ≤6 mo	0.61 (0.46-0.82)§	0.69 (0.51-0.93)†
None vs ≥7 mo	0.70 (0.54-0.90)†	0.70 (0.53-0.93)†
Formal education		
<Grade school vs completed grade school	0.78 (0.55-1.12)	0.93 (0.63-1.36)
<Grade school vs completed high school	0.70 (0.45-1.07)	0.67 (0.42-1.07)
<Grade school vs attended college	0.71 (0.46-1.09)	0.63 (0.40-1.01)
Traumatic experience		
Recent (occurred within the past year)	NA	2.41 (1.61-3.60)§
Lifetime (occurred more than 1 y ago)	2.03 (1.60-2.57)§	1.70 (1.31-2.19)§

\*Odds ratios are adjusted for all other variables in the analyses. CI indicates confidence interval; NA, not applicable.

†P<.01.

‡Gender is coded 0 for men and 1 for women.

§P<.001.

||Marital status is coded 0 for unmarried and 1 for married.

justing for demographic characteristics and SES. Exposure to a traumatic experience was the strongest predictor of the presence of both 1-year and lifetime psychiatric disorders (other than PTSD). Individuals who reported having a traumatic experience sometime in their lives were twice as likely to meet criteria for a lifetime psychiatric disorder, and 70% more likely to meet criteria for a 1-year disorder, when compared with those who had not experienced trauma. Similarly, individuals who reported having a traumatic experience in the previous year were more than twice as likely to meet criteria for a psychiatric disorder during that same year. These relationships remained significant and equally strong, even when adjusting for respondents' income and source of medical coverage (P<.01).

These same analyses also identified the demographic correlates for 1-year and lifetime psychiatric dis-

**Table 5. Summary of Multiple Regression Models Predicting Physical Functioning Scores\***

Variable	T†	P
Age, y		
<30 vs 30-40	-2.83	.005
<30 vs 40-50	-5.21	<.001
<30 vs over 50	-8.68	<.001
Ethnicity		
US-born whites vs US-born Latinos	0.81	.42
US-born whites vs Mexican immigrants	5.70	<.001
US-born whites vs Central American immigrants	3.60	<.001
Formal education		
<Grade school vs completed grade school	1.13	.26
<Grade school vs completed high school	1.52	.13
<Grade school vs attended college	2.79	.005
Employment status		
None vs ≤6 mo	4.50	<.001
None vs ≥7 mo	4.19	<.001
Presence of a 1-y psychiatric disorder‡	-4.71	<.001
Presence of a lifetime psychiatric disorder‡	-5.97	<.001

\*The sample population was 1456. The model  $F_{16,1434} = 17.17, P < .001$ . Only variables significant at the  $P < .05$  level are shown. All analyses included age, gender, ethnicity, marital status, formal education, employment status, lifetime and recent traumatic experience, and 1-year or lifetime psychiatric disorders as independent variables. The dependent variable was mean scores on the physical functioning subscale of the Short Form Health Survey. Low scores of physical functioning reflect poorer functioning. A negative relationship between the independent variable (IV) and physical functioning means that higher scores on the IV are associated with poorer functioning. A positive relationship between the IV and physical functioning means that higher scores on the IV are associated with better functioning.

†T values test whether  $\beta$  are significantly different from 0.

‡Psychiatric disorder was coded 0 for patients with no history of having a disorder and 1 for patients with at least 1 psychiatric disorder.

orders (see Table 4). Women were more likely than men to meet criteria for both 1-year and lifetime psychiatric disorders. Ethnicity was also associated with the presence of 1-year psychiatric disorders: Mexican immigrants were significantly less likely to meet criteria for a disorder when compared with US-born non-Latino whites (odds ratio=0.62, 95% confidence interval=0.44-0.88). Similarly, respondents who had worked in the previous year were significantly less likely than those who were unemployed to meet criteria for either a lifetime or a 1-year psychiatric disorder. Age was also associated with the presence of a lifetime disorder: the oldest group of patients were more likely to have met criteria for a disorder sometime in their lifetime than the youngest group.

#### CORRELATES OF PHYSICAL FUNCTIONING

Multiple regression analyses were used to examine how demographic characteristics, psychiatric disorders, and traumatic experiences were associated with physical functioning (Table 5). Results indicated that age, education, employment status, ethnicity, and the presence of a psychiatric disorder were significant predictors of physi-

**Table 6. Summary of Multiple Regression Models Predicting Number of Clinic Visits During 6-Month Follow-up Sample in a Population of 1439\***

Variable	T†	P
Age, y		
<30 vs 30-40	1.06	.29
<30 vs 40-50	5.39	<.001
<30 vs >50	7.80	<.001
Marital status	-2.53	.01
Employment status		
None vs ≤6 mo	-2.14	.03
None vs ≥7 mo	-2.06	.04
Presence of a 1-y psychiatric disorder‡	2.29	.02
Presence of a lifetime psychiatric disorder‡	2.98	.003

\*The model  $F_{16,1423} = 8.53, P < .001$ . Only variables significant at the  $P < .05$  level are shown. All analyses included age, gender, ethnicity, marital status, formal education, employment status, lifetime and recent traumatic experience, and 1-year or lifetime psychiatric disorders as independent variables. The dependent variable was the number of clinic visits during the 6-month period following the intake interview.

†T values test whether the dependent variable is significantly associated with changes in the independent variable.

‡Psychiatric disorder was coded 0 for patients with no history of having a disorder and 1 for patients with at least 1 psychiatric disorder.

cal functioning. Older patients reported poorer physical functioning than younger patients, and more educated and employed patients reported higher levels of physical functioning than their less educated and less frequently employed counterparts. Both the Mexican and Central American immigrants reported better physical functioning than the US-born non-Latino whites. The presence of a psychiatric disorder (either 1-year or lifetime) was the strongest predictor of physical functioning, even after adjusting for demographic characteristics and SES. Traumatic experiences were not directly related to current physical functioning.

#### CORRELATES OF CLINIC UTILIZATION

Multiple regression analyses were also used to examine the relationships among demographic characteristics, psychiatric disorders, traumatic experiences, and utilization of clinic services. The number of clinic visits made during the 6 months following the intake interview was associated with age, marital status, employment status, and the presence of a lifetime psychiatric disorder (Table 6). Older and unmarried patients visited the clinic more often than younger and married patients; employed individuals made fewer visits to the clinic than those who were unemployed; and individuals who met criteria for either lifetime or 1-year psychiatric disorders visited the clinic more often during the 6 months following the intake interview than those individuals without a psychiatric disorder. After adjusting for demographic characteristics, SES, and the presence of psychi-

atric disorders, trauma was not directly associated with the number of clinic visits made in the 6-month follow-up period.

## COMMENT

To our knowledge, this is the first study to assess general rates of various forms of traumatic experiences in a primary care sample. We used a well-validated diagnostic instrument to measure the types and prevalence of trauma, as well as psychiatric symptoms, among English- and Spanish-speaking patients. As a result, we believe this study provides important new information about the nature, frequency, and correlates of traumatic experiences in primary care patients. Most importantly, we have documented the relationships among traumatic experiences, psychiatric disorders, physical functioning, and utilization of services in an ethnically diverse sample of primary care patients.

Specifically, 57% of these primary care patients reported having at least 1 traumatic experience in their lifetime, and nearly 10% reported having had at least 1 such experience in the previous year. Having experienced a traumatic event was the strongest predictor of the presence of both lifetime and 1-year psychiatric disorders. Having a psychiatric disorder was, in turn, associated with low levels of physical functioning and high rates of utilization of clinic services. These findings are consistent with prior studies that have linked psychiatric disorders with impaired physical functioning and unexplained physical symptoms.<sup>5,20,22,32,33,56-59</sup> To the extent that traumatic experiences increase the risk of developing a psychiatric disorder, our data suggest that they may contribute indirectly to declines in physical functioning and increases in the utilization of services.

With more than half of the patients in this study reporting traumatic experiences, our findings also highlight the importance of educating primary care practitioners about the special needs of traumatized patients. Being able to identify patients who may be experiencing post-traumatic stress reactions or other mental disorders allows medical practitioners to make treatment decisions that closely match their patients' needs and preferences (eg, providing psychosocial counseling or referrals to mental health and/or self-help services).<sup>60,61</sup> Recent work suggests that collaborative care options can improve adherence to medical treatment, enhance patient satisfaction, and improve treatment outcomes for depressed primary care patients.<sup>62</sup> With nearly half of the patients in this study meeting criteria for a major psychiatric disorder, and the generally high rates of psychiatric comorbidity for those patients with mood disorders,<sup>28,63</sup> these data also strongly support the implementation of collaborative care options in primary care settings. Finally, it may be important to

screen patients with mental disorders for prior traumatic life events to help clarify the cause of these disorders.

The finding that Mexican immigrants reported fewer traumatic experiences and were less likely to meet criteria for a 1-year psychiatric disorder than the nonimmigrant patients was somewhat surprising. We had expected to find higher rates of trauma and psychiatric disorders among both the Mexican and Central American respondents due to the recent war in Central America, their immigration experience, and their socioeconomic disadvantage relative to the US-born patients.<sup>6,7,21</sup> However, our findings are consistent with other studies that have reported lower rates of psychiatric disorders among Mexican immigrants and a worsening of psychiatric health indices as acculturation into US society increases.<sup>64-66</sup> Vega et al<sup>66</sup> and Escobar<sup>67</sup> explain these findings by suggesting that the traditional norms, family structure, and social support systems characteristic of Mexican culture protect individuals against developing psychiatric disorders. As individuals begin to assimilate US norms and allow more traditional norms to become less important, they may become vulnerable to developing psychiatric symptoms. Although there are other potential sociocultural explanations for these findings (eg, the possible reluctance of Mexican immigrants to reveal symptoms due to cultural norms that stigmatize psychiatric disorders), ours and other studies open an intriguing and important area for future research.

Central American immigrants also had the highest rates of traumatic life experiences, yet notably reported the lowest rates of domestic violence. In addition, they were no more likely to have a psychiatric disorder than the US-born patients. These data clearly suggest the need to explore how specific cultural norms and beliefs help shape an individual's appraisal of, and response to, potentially traumatic life events. It is especially important to address these issues with immigrants from different ethnic backgrounds as well (eg, Southeast Asians, Eastern Europeans, Middle Easterners) to further our understanding of the unique roles immigration and traumatic experiences may play in both the development of psychiatric disorders and the utilization of health care services.

The sample for this study was obtained from a single clinical setting that serves predominantly low-income patients, so it may not be representative of primary care patients in general. Because individuals with lower SES are more vulnerable to trauma and its negative effects,<sup>68</sup> further research is needed to address the rates, types, and correlates of trauma in primary care patients who are more socioeconomically advantaged. In addition, because many of the patients in this study were low-income and required government-sponsored health care coverage, the range of the number of return clinic visits may be smaller than that of the general population of primary care pa-



tients. This may have made it more difficult to find the expected statistical relationship between trauma and utilization of clinic services. Nonetheless, we note that this clinic resembles many others throughout the United States that serve low-income, largely minority, patients.

Finally, because our interview was lengthy and may have been difficult for some patients to complete, a briefer, yet comprehensive, diagnostic interview (perhaps building on the Primary Care Evaluation of Mental Disorders [PRIME-MD] or a condensed version of the CIDI<sup>69</sup>) that includes a method for assessing traumatic life events is needed for future research with primary care patients. Such information could enhance primary care practitioners' abilities to identify the specific needs of traumatized patients.

In summary, a variety of traumatic experiences are common and associated with psychiatric disorders in an ethnically diverse sample of primary care patients. Psychiatric disorders, in turn, are associated with poorer physical functioning and increased utilization of services. Together, these findings suggest it is important for primary care providers to inquire about exposure to traumatic experiences and consider this information carefully when developing treatment plans. It is our hope that in so doing, health professionals will be able to identify and provide the most appropriate, cost-effective treatments for their patients.

Accepted for publication April 24, 2000.

This study was supported by grant RO1MH47536 from the National Institute of Mental Health, Bethesda, Md.

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