Violence, Mental Health, and Substance Abuse in Patients Who Are Seen in Primary Care Settings

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Objective: To explore the associations among having feelings of anger, being the perpetrator or victim of violent acts, having symptoms of psychiatric distress, and being substance abusers in patients who were seen in primary care settings.

Design and Setting: A brief self-administered questionnaire was completed by adults who were attending ambulatory clinics of a community hospital and of a neighborhood health center.

Participants: Seventy-three percent of the participants were women; 45% were Hispanic or Portuguese, 10% were African American, 35% were white, and 10% were of other ethnic or racial backgrounds; and most were of a lower socioeconomic status.

Results: Feelings of anger and acts of violence were most highly associated as follows: (1) among men, with being hit as a child, use of drugs, and symptoms of nervousness; (2) among all women, with a drinking problem and "being down"; and among white women, with a drinking problem, being down, and being hit as a child or as an adult or both. Consequences of being hit as a child were feelings of anger and drug use among men, drinking problems among all women, and psychiatric symptoms among white women.

Conclusions: An 18-item self-administered questionnaire can provide useful information on symptoms of psychiatric distress and substance abuse. These symptoms may be associated with feelings of anger and violence—both for the perpetrator and victim. This questionnaire may aid practitioners in the detection and management of physical and psychologic problems.

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IN THIS study, which we regard as a preliminary investigation, we examined the associations among symptoms of psychiatric distress, substance abuse, and the risk of violence—both for the perpetrator and victim—in patients who were seen in primary care settings.

Violence and alcoholism and other substance abuse are recognized as major public health concerns that face the United States. It is estimated that 5% to 10% of the general population suffers from alcoholism; the prevalence varies from 10% to 50% for hospitalized patients.[1] Drug- and alcohol-related morbidity are among the most neglected areas that require epidemiologic attention.[2] Prevalence data on violence are primarily restricted to homicide, suicide, and domestic abuse.

Mental health disorders are also a major public health problem. The prevalence of mental disorders in patients who are seen in ambulatory care settings has been estimated as 15% to 30%.[3,4] Major depressive disorders are probably the most common mental disorder in general medical settings; these disorders are about as common as the most common physical disorders. Yet, physicians in primary care settings often overlook significant mental disorders in the patients they treat; these physicians fail to recognize the substance abuse (ie, alcohol and drugs) and the underlying emotional or psychosocial risk that lead to violence and injuries.[1,2,5] Common symptom pathways (eg, headache, abdominal pain, pelvic pain, and multiple somatic complaints) may be undiscriminating flags for a wide variety of psychologic distress, as experienced in primary care populations.[6]

There is an increasing body of literature on the effects of physical and sexual abuse on the physical and mental health of women (including their reproductive health). Populations that have been studied include psychiatric inpatients and outpatients,[7-11] battered women,[12] attendees of gynecologic clinics,[13,14] women from the general population,[15,16] men and women from a military medical center,[17] and adolescents who were exposed to violence and associated symptoms of psychologic trauma.[18] A number of review articles that have been related to childhood abuse and

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PATIENTS AND METHODS

SETTING

Participants in the study were patients who were seen in 2 settings: (1) ambulatory clinics in a community hospital (79 patients) and (2) a neighborhood health center (57 patients). The patients were approached, as they were waiting to be seen by their primary care provider, and they were asked to participate in the study by completing a brief self-administered instrument. Informed consent was obtained from each patient.

STUDY INSTRUMENT

The study instrument consisted of 5 questions from the Mental Health Inventory that was developed by RAND, Santa Monica, Calif; there were also 7 questions on violence from a self-report measure of violence risk (including feelings of anger and violent behavior),[28] 2 questions on alcohol abuse,[1] and 1 question on drug abuse.[29]

The 5-item Mental Health Inventory has been reported to perform very favorably, as compared with longer instruments, for the detection of major depression, affective disorders generally, and anxiety disorders.[6] The instrument for measuring feelings of anger and violent behavior by self-report has been reported to be valid and reliable. Sensitivity and specificity were determined by administering the instrument to inpatients at a psychiatric hospital whose hospital records contained information on a history of violence and to a normal comparison group of college students. Based on the cutoff scores that were used, sensitivity and specificity were approximately 71% for the patient sample and 75% for the normal comparison sample, respectively.[28] With the use of the 2 following combined questions, Cyr and Wartman[1] found a sensitivity of 91.5% and a specificity of 89.7% for the detection of alcohol abuse: (1) Have you ever had a drinking problem? and (2) When was your last drink?

Following the procedures of Plutchik and vanPraag,[28] we constructed a measure of feelings of anger and violent behavior by summing 7 questions: 3 questions on feelings of anger, 2 questions on hitting family and/or nonfamily members, 1 question on the use of weapons, and 1 question on causing an injury in a fight. The possible range of scores was from 0 to 21. If the score was higher, then there was a greater degree of violence and/or feelings of anger. This scale will be referred to hereafter as the anger and violence scale (AVS).

In addition, we asked 4 questions about being the victims of violence with regard to whether the participant was ever hit as a child or as an adult or both within the family and/or outside the family. The purpose of these questions was to provide data to examine the associations between being the victim of violence and mental health disorders, substance abuse, feelings of anger, and violent behavior.

Demographic information (ie, age, gender, marital status, education, occupation, and ethnicity) was also sought. For most participants, the instrument was self-administered; nurses and other health personnel aided patients who needed help in reading and understanding the questions. Of the 136 participants, 103 patients responded in English, 30 patients of the neighborhood health center replied to a Spanish language version of the questionnaire, and 3 patients responded to a Portuguese language version of the instrument.

STATISTICAL METHODS

The data were analyzed on a personal computer by using commercially available statistical software (Statistical Analysis System, SAS Institute, Cary, NC). Methods included univariate analysis, analysis of variance, χ^2 analysis, correlation, and multiple regression. Two-tailed P values are reported.

its consequences have appeared recently; these articles have pointed out the methodologic problems with determining the consequences of childhood abuse and understanding the cycle of violence.[19-23] Violence, privacy, gender, and related issues have ethical dimensions and have been discussed increasingly in the medical literature.[24-27]

Yet, to our knowledge, there has been no coherent body of information on the associations and causal relationships between being a victim and having feelings of anger and/or being a perpetrator of violent behavior—particularly for patients who are seen in primary care settings or those patients from the general population. This lack of research is particularly noticeable with respect to the interactions of having feelings of anger, victimhood, being the perpetrator of violent acts, having symptoms of psychiatric distress, and being substance abusers.

The purpose of this preliminary study was to explore the associations among having feelings of anger, being the perpetrator or victim of violent acts, having symptoms of psychiatric distress, and being substance abusers in patients who were seen in primary care settings.

RESULTS

The sociodemographic characteristics are shown in **Table 1**. Most (73%) of the patients were women; the mean±SD age was 37.5±14.1 years. A great majority of the patients were unemployed or at home; of the 136 respondents, 29% did not state their occupation (ie, 33% of the women and 14% of the men), 12% did not state their education (ie, 14% of the women and none of the men), and 21% did not state their marital status (ie, 23% of the women and 14% of the men). Forty-five percent of the participants in the sample were Hispanic or Portuguese, 10% were African American, 35% were white, 10% did not state their ethnic or ethnic background, and 1 patient (<1%) classified herself as Asian. Of the women, 53% were Hispanic or Portuguese. The 98 women were subclassified as (1) nonwhite (62 patients)—Hispanic, Portuguese, African American, and Asian, and (2) white (36 patients)—self-classified as white or ethnic group not stated.

In the following sections, we present the findings that correspond to the 4 major parts of the study: (1) mental health, (2) substance abuse, (3) feelings of anger and

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Table 1. Demographic Characteristics of the Study Sample (N=136)*

Characteristic	Patients, % All (100%)	Women (73%)	Men (27%)
Study site			
Hospital	58	42	89
Health center	42	58	11
Ethnicity†			
Hispanic/Portuguese	45	53	25
African American	10	9	14
White	35	27	62
Other/not stated	10	11	0
Marital status†			
Single	21	23	14
Married	48	47	56
Divorced/separated/ widowed	20	19	22
Other/not stated	11	10	8
Occupation			
Unemployed	29	22	47
At home	18	26	0
Student	6	4	11
Clerical/skilled	11	7	22
Professional	7	8	6
Not given	29	33	14
Education			
High school or less	46	42	61
Technical school	6	8	0
College	22	25	17
Postcollege	7	6	11
Student	7	5	11
Not stated	12	14	0

*The mean± SD age of the patients in the study sample was as follows: all, 37.5± 14.1 years; women, 36.4± 13.4 years; and men, 40.3± 15.6 years.
†Due to rounding, the values may not total 100%.

being the perpetrator of violence, and (4) being the victim of violent behavior. In the last section, associations among responses on symptoms of psychiatric distress, substance abuse, and feelings of anger and being the perpetrator or victim of violence are presented.

MENTAL HEALTH—SYMPTOMS OF PSYCHIATRIC DISTRESS

Responses to the 5 mental health items are consistent with findings of reports that about 25% to 30% of patients who are seen in primary care settings have symptoms of anxiety and depression. In this sample, there were no significant differences by setting (hospital clinics vs neighborhood health center), gender, ethnicity, or marital status (**Table 2**).

SUBSTANCE ABUSE

Nearly 10% of the sample reported that they had a drinking problem, and 9% reported that they used drugs. Alcohol and drug abuse was slightly higher among men than women; there were no significant differences by ethnicity (Table 2).

VIOLENCE—PERPETRATOR

The mean±SD value on the AVS, which has a possible range of scores from 0 to 21, for all patients was 3.21±2.63; for women, the mean±SD value was 3.10±2.66; and for males, the mean±SD value was 3.51±2.64. The difference between genders was not significant. The median score was 3.0; the observed range was from 0 to 16.

Men were significantly different from women on the following 2 questions: (1) "Have you hit someone who is not a member of your family?" (39% vs 12%, respectively); and (2) "Have you ever caused an injury in a fight (bruises, bleeding, broken bones)?" (31% vs 7%, respectively) (**Table 3**).

VIOLENCE—VICTIM

For the questions that related to being the victim of violence, 37% of the participants reported that, in childhood, they were hit within the family, and 20% said that they were hit outside the family; in adulthood, 24% stated that they were hit within the family, and 25% indicated that they were hit outside the family. There were no statistically significant differences by gender or ethnicity (Table 3).

ASSOCIATIONS AMONG MENTAL HEALTH, SUBSTANCE ABUSE, AND VIOLENCE VARIABLES

The analyses were directed toward testing the following hypotheses for patients who were seen in primary care settings: (1) feelings of anger and violent behavior are associated with symptoms of psychiatric distress, (2) feelings of anger and violent behavior are associated with substance abuse, (3) symptoms of psychiatric distress are associated with substance abuse, and (4) being hit as a child is associated with violent behavior as an adult.

First, simple correlations among the variables are presented. Second, we consider 2 variables: (1) feelings of anger and the violent behavior scale (ie, the AVS) and (2) being hit as a child and as an adult within the family.

1. Associations among scores on the AVS, mental health symptoms, and alcohol and substance abuse showed differences by gender. The most striking association was the finding that in women, high scores on the AVS were most strongly related to drinking problems ($P<.01$); however, for men, high scores correlated with the use of drugs ($P<.01$) (even though the numbers are small and the proportions with drinking problems and the reported use of drugs are relatively small, $P<.01$ values are based on t tests and correlation coefficients). The scores on the AVS among both men and women were significantly correlated with symptoms (ie, nervous, blue, down, not calm, and not happy) of psychiatric distress (**Table 4**).

2. Being the victim of violence as a child (ie, being hit within the family) was highly correlated with the AVS—most notably among men (n=36) (r=0.60, $P<.001$) and among white women (n=36) (r=0.53, P=.009), but not among nonwhite women (n=62) (r=0.12, P=.33). Being hit as an adult within the family also correlated sig-

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Table 2. Responses to Mental Health, Substance Abuse, and Violence Questions*

Question	All Patients	Women: All	Women: Nonwhite	Women: White	Men
Mental health†					
How much of the time during the last month have you:					
Been a very nervous person?	25.8	26.5	22.5	33.3	25.0
Felt (not-) calm and peaceful?	32.4	30.6	30.7	30.5	38.9
Felt downhearted and blue?	25.7	26.6	24.2	30.6	25.0
Been a (not-) happy person?	20.6	18.4	16.1	22.2	25.0
Felt so down in the dumps that nothing could cheer you up?	21.3	22.4	19.3	27.7	19.4
Drug use‡					
How often in the past 6 months have you used drugs?	8.8	7.1	6.5	8.3	13.9
Alcohol§					
Have you ever had a drinking problem?	9.6	8.2	4.8	13.9	13.9

*On a 5-point scale: "None of the time," "A little of the time," "Some of the time," "Quite a bit of the time," and "A great deal of the time." Data for responses are given as percentages of patients.

†Percentage of patients who responded, "Quite a bit of the time" or "A great deal of the time."

‡Percentage of patients who responded at least once in the past 6 months.

§Percentage of patients who responded yes.

Table 3. Feelings of Anger and Violence Questions*

Question	All Patients	Women: All	Women: Nonwhite	Women: White	Men
Perpetrator					
Do you find that you get angry very easily?	86.0	87.8	83.9	94.4	80.6
How often do you feel very angry at people?	75.7	73.5	69.4	80.6	80.6
Do you find that you get angry for no reason at all?	44.9	41.8	43.5	38.4	52.8
Have you ever hit or attacked a member of your family?	22.8	21.4	21.0	22.0	25.0
Have you ever hit or attacked someone who is not a member of your family?	19.9	12.2	12.9	11.1	38.9
Have you ever caused injury in a fight (bruises, bleeding, broken bones)?	11.8	7.1	4.8	11.1	30.6
Have you ever used a weapon to try to harm someone?	5.1	6.2	4.8	8.3	2.8
Victim					
When you were a child, were you ever hit or attacked by a member of your family?	36.8	35.7	30.6	44.4	38.9
When you were a child, were you ever hit or attacked by someone who was not a member of your family?	19.9	20.4	17.7	25.0	16.7
As an adult, were you ever hit or attacked by a member of your family?	23.5	19.4	21.0	16.7	33.3
As an adult, were you ever hit or attacked by someone who was not a member of your family?	25.0	21.4	19.4	25.0	33.3

*On a 4-point scale: "Never," "Sometimes," "Often," and "Very Often." Data are given as percentages of patients who responded "Sometimes," "Often," or "Very often."

nificantly with the AVS in white women (r=0.41, P=.01) and in nonwhite women (r=0.27, P=.04) but not in men (r=0.03, P=.88) (Table 4).

In addition to drinking problems, symptoms of psychiatric distress were associated with being hit as a child among white women (r=0.55, P<.001) but not among nonwhite women (r=0.12, P=.34) and not among men (r= −0.01, P=.96) (**Table 5**).

Being hit within the family as a child and as an adult were significantly correlated among white women (r=0.57, P=.001), but to a lesser extent among nonwhite women (r=0.29, P=.02) and among men (r=0.32, P=.06) (**Table 6**).

To address the following question, we examined the relationship between being hit as a child (the victim) and hitting someone in the family (the perpetrator): "Does violence beget violence?" Among men, a correlation was found (r=0.60, P=.001). Among women, the correlation was higher among white women than among nonwhite women (r=0.45, P=.006 and r=0.25, P=.05, respectively) (Table 6).

Regression Analysis

Feelings of Anger and Violent Behavior (AVS). To investigate what may be the factors associated with feelings of anger and violent behavior, multiple regression with a forward selection procedure was carried out. Scores on the AVS were regressed on other variables. In model 1, the following variables were eligible to enter into the regression

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Table 4. Correlations of AVS*

Variable	Women			All Men
	All	Nonwhite	White	
Nervous	0.44†	0.47†	0.38§	0.58†
Down	0.49†	0.40‡	0.64†	0.23
Not calm	0.33‡	0.27§	0.45‡	0.40§
Blue	0.36‡	0.31§	0.43‡	0.29
Not happy	0.42†	0.32‡	0.58‡	0.35§
Sum of mental health items	0.52†	0.48†	0.59†	0.47‡
Problems with drinking	0.55†	0.60†	0.53‡	−0.08
Drug use	0.14	0.30§	−0.10	0.57‡
Hit as child	0.30‡	0.12	0.53‡	0.60†
Hit as adult	0.31‡	0.27§	0.41‡	0.03

**AVS indicates anger and violence scale. Correlations are associated with the following variables: symptoms of psychiatric distress, problems with drinking, drug use, being hit as a child or adult, by gender, and for nonwhite and white women.*
†*P*<.001.
‡*P*<.01.
§*P*<.05.

Table 5. Correlations of Being Hit as a Child*

Variable	Women			All Men
	All	Nonwhite	White	
Nervous	0.25†	0.10	0.41‡	0.11
Down	0.35‡	0.26†	0.46‡	−0.14
Not calm	0.18	−0.06	0.51‡	0.04
Blue	0.21†	−0.01	0.50‡	−0.13
Not happy	0.30‡	0.16	0.46‡	0.13
Sum of mental health items	0.33‡	0.12	0.55§	−0.01
Problems with drinking	0.48§	0.36‡	0.56§	−0.25
Drug use	0.05	0.02	0.07	0.56§

**Correlations are associated with the following variables: symptoms of psychiatric distress, problems with drinking, drug use, by gender, and for nonwhite and white women.*
†*P*<.05.
‡*P*<.01.
§*P*<.001.

equation: the mental health items, use of drugs (yes/no), problems with drinking (yes/no), and age. In model 2, in addition to the above-mentioned mental health and substance abuse variables, the 4 variables on being the victim of violence were eligible to enter into the regression equation (**Table 7**).

Men. Among men, in model 1, the 2 variables of being nervous and using drugs accounted for 61% of the variance in the AVS (P=.001). In model 2, the 3 variables of being hit as a child within the family, being nervous, and using drugs accounted for 70% of the variance in scores on the AVS (Table 7).

Women. Among women, in model 1, having a drinking problem and "being down in the dumps" accounted for 39% of the variance; in model 2, drinking, being down, and being hit as an adult increased the R^2 to 41%. Ethnic differences are noteworthy; among white women, for model 1, the feeling of being down resulted in an R^2 of 41%; a problem with drinking (marginally significant with P=.10) raised the R^2 to 45%; however, in model 2, the feeling of being down and being hit as an adult accounted for 53% of the variance. Among nonwhite women, a problem with drinking was a more important correlate of the AVS; in model 1, drinking, being blue, and not being calm accounted for 50% of the variance; in model 2, in addition to these 3 variables, being hit as an adult increased the R^2 to 55% (Table 7).

Being the Victim of Violence as a Child

Men. Among men, the 3 variables of the AVS, being blue, and having a drinking problem accounted for 60% of the variance in the outcome variable of being hit as a child; however, the association between the AVS and being blue and drinking was negative.

Women. Among women, a problem with drinking and being down accounted for 26% of the variance in being hit as child. However, again, in women, the associations were more marked in white women than in nonwhite women. For white women, a problem with drinking and the AVS accounted for 39% of the variance, while in nonwhite women, the only variable to be significantly associated with being hit as a child was a problem with drinking, and its contribution to the variance was 13% (Table 7).

In summary, the AVS, which is a scale of feelings of anger and violent behavior, was associated with symptoms of psychiatric distress and with substance abuse—both in men and in women. There are, however, some differences: the variables that were most highly associated with the AVS for men were being nervous and using drugs; for women, these variables were a problem with drinking and symptoms of psychiatric distress (eg, being down in the dumps). The magnitude of the associations seem to be slightly higher in the men in this sample and higher in white women compared with nonwhite women.

Being the victim of violence is also associated with high AVS scores. Among men in this sample, differences by ethnicity were not observed. In women, however, the consequences of being hit in childhood were more marked in white patients than in nonwhite patients. In white women, a correlation between being hit as a child within the family and the AVS was found (r=0.53, P=.009); however, for nonwhite women, a different correlation was found (r=0.12, not significant). Other important correlates were problems with drinking and symptoms of psychiatric distress. The presence of a problem with drinking in women but not in men was correlated with being a victim of violence in childhood, especially among white women (r=0.56, P=.004) vs nonwhite women (r=0.36, P=.004).

Being hit as a child within the family correlated with symptoms of psychiatric distress—especially in white women. For white women, we found a correlation between the sum of the 5 mental health items (ie, nervous, down, blue, not calm, and not happy) (r=0.55, P=.005) compared with nonwhite women (r=0.12, P=.33) and men (r=−0.008, P=.96).

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Table 6. Correlations Between Being Hit as a Child Within the Family and Being Hit as an Adult Within the Family and Correlations of Being a Perpetrator of Violence Within the Family (Hitting Family Members)

Variable	Women			All Men
	All	Nonwhite	White	
Child*				
Hit as adult	0.37†	0.29‡	0.57†	0.32
Perpetrator§				
Hit as child	0.33‖	0.25	0.45‖	0.60†
Hit as adult	0.35†	0.31‡	0.45‖	0.28

*Correlations are associated with the following variables: by gender and for nonwhite and white women.
†P<.001.
‡P<.05.
§Correlations are associated with the following variables: being hit as a child and being hit as an adult by gender and for nonwhite and white women.
‖P<.01.

Being hit as an adult had special associations for women—especially white women. For white women, being hit as an adult was correlated both with a problem with drinking (r=0.39, P=.02) and feelings of anger and violent behavior (the AVS) (r=0.41, P=0.01); for nonwhite women, there was a correlation with the AVS (r=0.27, P=.04) but not with a problem with drinking (r=0.04, P=.76).

In summary, being the victim of violence was associated with drug use in men and in problems with drinking in women (ie, both nonwhite and white) and with symptoms of psychiatric distress in white women.

COMMENT

In this preliminary study, we describe results from validated instruments on anxiety and depression, substance abuse, and violence risk, and the associations among them. In our study, the patients were largely nonwhite and of a lower socioeconomic status, but our results are consistent with those found in the literature. Surprisingly, few gender differences were found in responses to the questions on the study instrument. Yet, the associations among questions revealed interesting differences by gender (eg, nervousness and drug use in men and being down in the dumps and problems with drinking in women).

Among women, ethnic differences were observed. White women compared with nonwhite women seemed to be more affected by being the victims of violence in childhood. It is not certain whether the ethnic differences among women would be observed in a large sample or in patients who were seen in different settings. It is also unclear if the results are generalizable to patients from a different socioeconomic status.

The data in this study are cross-sectional. Causal relations cannot be established. For example, symptoms of psychiatric distress might be the cause or the result of a drinking problem.

With respect to events in childhood, there is less ambiguity. The differences that were observed by gender and by ethnicity among women are particularly noteworthy. The

Table 7. Multiple Regression Models*

Dependent Variable	R^2	P to Enter
Men		
AVS scale		
Model 1		
Nervous	0.33	<.01
Drugs	0.61	<.001
Model 2		
Hit as a child	0.36	<.001
Nervous	0.62	<.001
Drugs	0.70	<.05
Hit as a child		
AVS scale	0.36	<.001
Blue†	0.46	<.05
Problems with drinking†	0.60	<.01
All Women		
AVS scale		
Model 1		
Problems with drinking	0.30	<.001
Down	0.39	<.01
Nervous	0.41	.11
Model 2		
Problems with drinking	0.30	<.001
Down	0.39	<.01
Hit as an adult	0.43	<.05
Nervous	0.45	.11
Hit as a child		
Problems with drinking	0.24	<.001
Down	0.26	.055
Nonwhite Women		
AVS scale		
Model 1		
Problems with drinking	0.36	<.001
Blue	0.45	<.01
Not calm	0.50	<.05
Model 2		
Problems with drinking	0.36	<.001
Blue	0.45	<.01
Hit as an adult	0.50	<.05
Not calm	0.55	<.05
Hit as a child		
Problems with drinking	0.13	<.01
White Women		
AVS scale		
Model 1		
Down	0.41	<.001
Problems with drinking	0.45	.10
Model 2		
Down	0.41	<.001
Hit as an adult	0.53	<.01
Hit as a child		
Problems with drinking	0.31	<.01
AVS	0.39	.054

*AVS indicates anger and violence scale, which rated feelings of anger and violent behavior.
†There was a negative association with the AVS.

associations for men were feelings of anger and violent behavior; however, for women, they were associated with drinking problems, and for white women, they were associated in particular with symptoms of psychiatric distress (ie, feelings of being down, not calm, and blue).

The results that were obtained from our study population appear to be valid and consistent with findings of

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other studies on the prevalence of anxiety and depression in general populations and alcohol abuse.[1,3,4] Estimates of the prevalence of violence and abusive behavior have been reported by a number of investigators for samples from a variety of populations, including psychiatric inpatients and outpatients.[7-11,14,16-18,20] Despite differences in study populations, definitions of violence, and methods of inquiry and data collection, our results fall within the range of findings from reports of other investigators. To cite 1 instance, the finding of the effect of childhood and adulthood physical abuse on women and its association with a drinking problem is consistent with the literature and tends to validate our data.[7,30-32]

One caveat in interpreting and generalizing from the results that have been reported is the fact that the data are self-reported and depend on memory and subjective perception of the impact of events. As an example, we cite the finding from the univariate results that the reporting of events and the reporting of feelings show little difference by gender or by ethnicity (among women). However, the impact of past events on present feelings and behaviors show significant differences. It should be noted that while the frequency of "being hit" as a child was determined, the severity was not assessed. Further research is needed to understand the findings of this study better.

A possible limitation is that for this study population, no attempt was made to validate the instrument against a "gold standard" (eg, a psychiatrist's diagnosis in comparison with patient scores on the mental health questions). A further limitation is the sample size that precludes more detailed analyses by ethnicity, particularly for men.

Despite the limitations, the findings indicate that the use of a brief self-administered instrument could provide valuable information to practitioners and for policymakers, and these findings serve as an aid to the detection and management of physical and psychologic problems. For example, we cite the previously unreported association between "violence"—feelings of anger and violent behavior—defined by us and other investigators[28] and scoring high on the item from the Mental Health Inventory as follows: "How much of the time during the last month have you been a very nervous person?" (among men); and "How much of the time during the last month have you been down in the dumps?" (for women). The significant correlation between being hit as a child and the feelings of anger and violent behavior on the AVS, both among women and men, raises issues that may help in understanding the "cycle of violence" (ie, children who were hit within the family learn violence as a behavioral practice and go on to hit their own children).

Literature reviews[19-21,23] discuss the following question, to quote Kaufman and Zigler[19]: "Does violence beget violence?" Such reviews conclude with cautions on the difficulty of obtaining clear-cut answers. The inclusion of questions on both being the perpetrator and also the victim of violent behavior in our study adds new data to this complex question.

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