

Community Violence Perpetration and Victimization Among Adults With Mental Illnesses

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The risk of violence associated with mental illnesses is a topic of research, media coverage, and debate. Research indicates that between 11% and 52% of adults with mental illnesses have been violent within a 12-month period,¹⁻⁷ and data from the National Comorbidity Survey show that rates of violence for adults with mental illnesses are 2 to 8 times greater than in the general population.⁸ Other studies show modest but significant relationships between mental illness and violence,^{3,9,10} even after controlling for substance abuse.¹¹ Although highly publicized cases of violence perpetrated by adults with mental illnesses have highlighted their “dangerousness,” data suggest they experience victimization at rates comparable to or higher than their rates of perpetration.¹² Studies show 12-month prevalence rates between 20% and 44%,^{7,12-15} and indicate the likelihood of experiencing violent victimization is 23 times higher in adults with mental illnesses compared with the general population.¹² Despite these findings, there remains a focus on violence perpetration to the neglect of victimization in this vulnerable population.

The increased risk of violent outcomes that is associated with mental illnesses represents a substantial public health burden. Violence can be devastating to victims and perpetrators alike, as well as being costly to the public.^{16,17} In addition to physical injury, violence may precipitate the loss of personal liberty because of incarceration¹⁸ or civil commitment,¹⁹ require implementation of expensive clinical and risk assessment and management strategies,²⁰ perpetuate the stigma associated with mental illness,²¹ and disrupt continuity of care.²² Consequently, an understanding of the prevalence and nature of community violence—both perpetration and victimization—among adults with mental illnesses is critical to public health research and practice.

Unfortunately, the empirical literature is limited. First, there are many more studies of

Objectives. In a large heterogeneous sample of adults with mental illnesses, we examined the 6-month prevalence and nature of community violence perpetration and victimization, as well as associations between these outcomes.

Methods. Baseline data were pooled from 5 studies of adults with mental illnesses from across the United States ($n = 4480$); the studies took place from 1992 to 2007. The MacArthur Community Violence Screening Instrument was administered to all participants.

Results. Prevalence of perpetration ranged from 11.0% to 43.4% across studies, with approximately one quarter (23.9%) of participants reporting violence. Prevalence of victimization was higher overall (30.9%), ranging from 17.0% to 56.6% across studies. Most violence (63.5%) was perpetrated in residential settings. The prevalence of violence-related physical injury was approximately 1 in 10 overall and 1 in 3 for those involved in violent incidents. There were strong associations between perpetration and victimization.

Conclusions. Results provided further evidence that adults with mental illnesses experienced violent outcomes at high rates, and that they were more likely to be victims than perpetrators of community violence. There is a critical need for public health interventions designed to reduce violence in this vulnerable population. (*Am J Public Health.* 2014;104:2342–2349. doi:10.2105/AJPH.2013.301680)

perpetration than victimization; a review of the literature found 3 times as many publications about the link between mental illness and violence compared with the link between mental illness and victimization.²³ Second, although they are risk factors for each other,²⁴⁻²⁶ there have been few studies of community violence perpetration and victimization. Only a handful of peer-reviewed publications report on both outcomes in the same sample of adults with mental illnesses during the same reference period.²⁷⁻³⁰ Third, studies that have examined both outcomes have restricted power and generalizability because of the relatively small, nonrepresentative samples. Fourth, there is heterogeneity in the operational definitions of violence, preventing meaningful comparisons or aggregation of findings. Fifth, violent outcomes are frequently measured with a single yes or no question (e.g., “Have you been victimized in the past 12 months?”), a measurement approach with limited sensitivity.³¹

THE PRESENT STUDY

There have been few large-scale investigations of community violence perpetration and victimization in a sample of adults with mental illnesses; our study addressed this empirical gap through secondary data analyses. We pooled data across 5 studies that assessed violence and victimization using the same measure and timeframe. First, we examined the 6-month prevalence of community violence perpetration and victimization. Second, we reported on the prevalence of physical injuries resulting from violence perpetrated by adults with mental illnesses and the prevalence of physical injuries they incurred as victims. Third, we explored statistical associations between the occurrence of community violence perpetration and victimization. When possible, we compared findings by study of origin, participant characteristics (e.g., age, sex, race/ethnicity), and primary diagnoses. Fourth, we described the locations in which adults with mental illnesses perpetrated violence.

METHODS

We pooled baseline data from 5 studies of adults with mental illnesses ($n = 4480$). All studies included broad inclusion and minimal exclusion criteria and enrolled a range of participants, from exacerbated inpatients to partially remitted outpatients. Study protocols were approved by relevant institutional review boards, and all participants gave written informed consent. The institutional review boards of North Carolina State University, RTI International, and University of California, Davis approved the present analyses.

Facilitated Psychiatric Advance Directive Study

The Facilitated Psychiatric Advance Directive (F-PAD) Study³² investigated the implementation of a facilitated psychiatric advance directive intervention. Participants ($n = 469$) were recruited from 2 mental health systems in North Carolina. Inclusion criteria were (1) aged 18 to 65 years, (2) schizophrenia-spectrum or major mood disorder, and (3) currently in treatment. Data were collected between 2003 and 2007.

MacArthur Mental Disorder and Violence Risk Study

The MacArthur Mental Disorder and Violence Risk (MacRisk) Study² examined violence risk among civil psychiatric patients. Participants ($n = 1136$) were recruited from 3 sites: Pittsburgh, Pennsylvania; Kansas City, Missouri; and Worcester, Massachusetts. Inclusion criteria were (1) English-speaking White, Black, or Hispanic; (2) aged 18 to 40 years; and (3) schizophrenia-spectrum, depression, mania, brief reactive psychosis, delusional disorder, other psychotic disorder, substance abuse or dependence, or personality disorder. Data were collected between 1992 and 1995.

Schizophrenia Care and Assessment Program

The Schizophrenia Care and Assessment Program (SCAP)⁵ examined clinical, functional, and service utilization outcomes for adults with schizophrenia. Participants ($n = 404$) were recruited from treatment facilities across North Carolina. Inclusion criteria were (1) aged 18 years or older, (2) schizophrenia, and (3)

current service use. Data were collected between 1997 and 2002.

MacArthur Mandated Community Treatment Study

The MacArthur Mandated Community Treatment (MacMandate) Study³³ collected data regarding lifetime experience of leverage (e.g., money, housing, criminal justice, outpatient commitment) to improve treatment adherence among psychiatric outpatients. Participants ($n = 1011$) were recruited from 5 sites: Chicago, Illinois; Durham, North Carolina; San Francisco, California; Tampa, Florida; and Worcester, Massachusetts. Inclusion criteria were (1) aged 18 to 65 years, (2) English- or Spanish-speaking, (3) current outpatient treatment, and (4) first service occurred at least 6 months before study entry. Data were collected between 2002 and 2003.

Clinical Antipsychotic Trials of Intervention Effectiveness Study

The Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) Study³⁴ examined the effectiveness of second- compared with first-generation antipsychotic medication for treating adults with schizophrenia. Participants ($n = 1460$) were recruited from 57 sites (16 university clinics, 10 state mental health agencies, 7 Veteran's Affairs Medical Centers, 6 private nonprofit agencies, 4 private practice sites, and 14 mixed system sites) across the United States. Inclusion criteria were (1) aged 18 to 65 years, (2) schizophrenia, and (3) ability to take oral antipsychotics. Data were collected between 2001 and 2004.

Measures

Community violence. Prevalence of community violence perpetration and victimization was assessed using the MacArthur Community Violence Screening Instrument (MCVSI).² The MCVSI includes 8 behaviorally based self-report questions. Items assess

1. pushing, grabbing, or shoving;
2. kicking, biting, or choking;
3. slapping;
4. throwing an object;
5. hitting with a fist or object;
6. sexual assault;

7. threatening with a weapon in hand; and
8. using a weapon.

For each item, participants were first asked if someone did this to them, and then they were asked if they did this to someone else. When there was a positive response, information pertaining to the location of the incident and resulting injury was collected. Community violence was defined as a positive response to at least 1 item querying if the participant did this behavior to someone else, and community victimization was defined as a positive response to at least 1 item querying if someone else did this behavior to the participant. Studies that reported findings of the MacRisk and MacMandate studies used the labels "violence" and "other aggressive acts" to describe and distinguish between severity of acts. However, we used the label violence in the present study, qualified by whether injuries were incurred, to describe these behaviors. This definition was consistent with the definitions of violent crime used in reports by the Bureau of Justice Statistics and the Federal Bureau of Investigation Uniform Crime Reporting Program.^{35,36} This approach was used in other studies that also used the MCVSI.³⁷

We dichotomized responses to obtain the prevalence of violent outcomes (yes or no) in the 6 months before the baseline interviews or before hospitalization for participants who were inpatients at baseline. Data on repeated incidents of perpetration were available in the MacRisk, SCAP, and MacMandate studies; repeated incidents of victimization were available in the SCAP and CATIE studies. Whether participants physically injured the victim(s) during their perpetration of violence was queried in all studies, except the SCAP study. Whether participants were injured as a result of victimization was queried only in the CATIE study. Location of violence was assessed in the MacRisk, MacMandate, and F-PAD studies, but only for perpetration and not victimization. (Data on the availability of outcomes by study are available as a supplement to the online version of this article at <http://www.ajph.org>.)

Participant characteristics. Information pertaining to participant age (in years), sex, race/ethnicity (White, Black, Hispanic, other), primary diagnosis (schizophrenia, bipolar

disorder, major depressive disorder, substance use disorder, other), and hospitalization within 3 months of the baseline (yes or no) was collected through interview and review of official records.

Statistical Analysis

We first calculated descriptive statistics. To address our first research aim, we computed prevalence of self-reported violence perpetration and victimization, and to address our second aim, we computed prevalence of injuries resulting from violence perpetration and victimization. Results were then compared using the χ^2 analysis by study, demographic characteristics, primary psychiatric diagnosis, and whether the patient was hospitalized in the 3 months before the baseline assessment. To address our third aim, we calculated partial correlations and odds ratios to examine the magnitude of the association between perpetration and victimization, controlling for study. We again examined findings across demographic characteristics, primary diagnoses, and hospitalization. To address our fourth aim, we categorized and computed prevalence of the locations in which violence was perpetrated by participants.

RESULTS

Across studies, almost two thirds of participants were male (59.8%). About half (51.4%) were White, one third (37.7%) were Black, 7.1% were Hispanic, and 3.9% were other races/ethnicities. Participant ages ranged between 18 and 71 years (mean = 38.97 years; SD = 11.30 years). Schizophrenia was the most prevalent primary diagnosis (63.5%), followed by major depression (18.4%), bipolar disorder (9.6%), substance use disorder (6.1%), and other disorders (e.g., anxiety; 2.5%). Approximately one third of participants (39.6%) were hospitalized within 3 months of the baseline assessment.

Prevalence of Community Violence Perpetration and Victimization

Table 1 shows the 6-month prevalence of community violence perpetration and victimization. Approximately one quarter of participants (23.9%) reported perpetrating at least 1 incident of community violence, with

prevalence ranging from 11.0% (SCAP) to 43.4% (MacRisk) across studies. Of those who reported perpetrating violence, about one third (36.7%) reported perpetrating violence on more than 1 occasion; the range across studies for repeat perpetration was much smaller (from 34.2% in SCAP to 37.4% in CATIE). Almost one third of participants (30.9%) reported at least 1 incident of violent victimization in the community, with prevalence ranging from 17.0% (SCAP) to 56.6% (MacRisk) across studies. Of those who reported being victimized, almost half (43.7%) reported being victimized on more than 1 occasion; again, the range across studies was small (from 42.8% in MacMandate to 47.6% in SCAP). The prevalence of community violence victimization overall and repeated victimization was significantly higher than the prevalence rates for perpetration ($P < .001$).

Analyses revealed significant differences in prevalence rates as a function of the study of origin and participant characteristics (Table 1). Specifically, prevalence of violence perpetration and victimization were almost twice the overall rate in the MacRisk study compared with the other studies. Prevalence of violence perpetration and victimization were more than twice as high in younger compared with older participants, although rates of repeated perpetration and victimization were similar across age groups. Women were significantly more likely to report violence perpetration and multiple incidents of perpetration and victimization; however, prevalence of any victimization in women and men were comparable. Hispanic participants reported lower rates of perpetration and victimization than White and Black participants. Compared with participants with other primary diagnoses, rates of perpetration and victimization were lower for those with schizophrenia and higher for those with substance use disorders. Violence perpetration and victimization were more prevalent among participants who had been hospitalized within 3 months of baseline.

Prevalence of Physical Injuries

Table 2 shows the prevalence of physical injuries resulting from violence perpetration and victimization. Ranging from 4.2% (MacMandate) to 16.6% (MacRisk) across studies, the overall prevalence of physical injuries

resulting from violence perpetration (8.7%) was higher than prevalence of injuries associated with victimization (7.5%; $P = .05$). The ratio of any violence perpetration to perpetration resulting in physical injury was approximately 3:1 and the ratio of any victimization to victimization resulting in physical injury was approximately 4:1; that is, for every 3 adults with mental illnesses who perpetrated violence, 1 of them physically injured the victim(s), and for every 4 adults with mental illnesses who was victimized, 1 of them was physically injured. Approximately 1 in 3 participants who reported violence—perpetration or victimization—also reported injuries, but injuries were reported more frequently by those who were victimized (39.3%) than those who perpetrated violence (34.7%; $P < .001$).

Comparisons by study and participant characteristics revealed differences that often mirrored differences in prevalence of perpetration and victimization (Table 2). Injury rates overall were much higher in younger compared with older participants, for both community violence perpetration (12.4% vs 4.5%) and victimization (9.7% vs 6.0%). However, comparisons also revealed notable differences; for instance, women reported higher rates of perpetration compared with men (25.5% vs 22.8% of the sample), but more men reported perpetrating violence that resulted in injury than did women (9.4% vs 7.7%). Similarly, the ratio of perpetration to perpetration resulting in physical injury was similar for the MacRisk and CATIE studies (3:1), but different for the F-PAD (2:1) and MacMandate (5:1) studies; that is, for every 3 participants in the MacRisk and CATIE studies who perpetrated violence, 1 of them physically injured the victim(s), whereas 1 of every 2 participants in the F-PAD and 1 of every 5 participants in the MacMandate studies who perpetrated violence inflicted injury.

Associations Between Violence Perpetration and Victimization

Table 3 shows the correlations and odds ratios, which were calculated controlling for the study, between the 6-month prevalence of community violence perpetration and victimization, overall and across participant characteristics. Results showed a strong association (0.50) and substantial shared variance (25.0%) between perpetration and victimization, and

TABLE 1—Prevalence of Community Violence Perpetration and Victimization Among Adults With Mental Illnesses: Five Studies in the United States, 1992–2007

Variable	Perpetration		> 1 Incident Among Perpetrators		Victimization		> 1 Incident Among Victims	
	%	<i>P</i>	%	<i>P</i>	%	<i>P</i>	%	<i>P</i>
Overall (n = 4474)	23.9	< .001	36.7	< .001	30.9	< .001	43.7	.02
Study		< .001		0.92		< .001		.49
F-PAD (n = 469)	25.2		...		24.1		...	
MacRisk (n = 1136)	43.4		36.5		56.6		...	
SCAP (n = 400)	11.0		34.2		17.0		47.6	
MacMandate (n = 1010)	19.3		...		27.5		42.8	
CATIE (n = 1459)	15.0		37.4		19.2		...	
Age, y		< .001		.46		< .001		.64
≤ 39 (n = 2357)	32.8		37.3		40.7		42.5	
≥ 40 (n = 2110)	14.0		33.3		20.0		45.1	
Sex		.03		.01		.84		.05
Male (n = 2677)	22.8		33.2		31.0		40.5	
Female (n = 1797)	25.5		42.4		30.7		52.1	
Race/ethnicity		.16		.22		.03		.4
White (n = 2297)	24.3		35.4		32.1		38.6	
Black (n = 1683)	24.6		39.4		30.3		46.8	
Hispanic (n = 317)	19.2		26.8		24.0		51.5	
Other (n = 172)	20.9		54.5		32.6		41.7	
Primary diagnosis		< .001		.19		< .001		...
Schizophrenia (n = 2833)	16.1		35.8		22.9		43.7	
Bipolar disorder (n = 428)	27.3		32.7		37.6		...	
Major depression (n = 824)	37.0		40.4		40.9		...	
Substance use disorder (n = 272)	54.0		32.7		67.7		–	
Other (n = 110)	37.3		63.6		42.7		–	
Hospitalized in previous 3 mo		< .001		.27		< .001		.28
Yes (n = 1773)	36.9		35.7		45.9		39.8	
No (n = 2700)	15.3		40.5		21.1		45.9	

Note. CATIE = Clinical Antipsychotic Trials of Intervention Effectiveness; F-PAD = Facilitated Psychiatric Advance Directive study; MacMandate = MacArthur Mandated Community Treatment study; MacRisk = MacArthur Mental Disorder and Violence Risk study; SCAP = Schizophrenia Care and Assessment Program. Percents are valid percentages. Numerical discrepancies reflect missing data.

that the occurrence of one was associated with an 11-fold increase in risk for the other. Chi-square analysis also revealed differences by participant characteristics. The shared variances between perpetration and victimization were almost twice as great for White (27.0%) and Black (26.0%) participants compared with Hispanic participants (15.2%) and participants of other races/ethnicities (13.7%), as were the odds ratios (Table 3). Correlations between community perpetration and victimization were also notably greater for participants with schizophrenia and substance use disorders compared with participants with other primary

diagnoses (Table 3). Odds ratios for participants with schizophrenia and substance use disorders compared with those with bipolar, major depressive, and other disorders were about twice as large (Table 3). By contrast, there was little variation in the associations between perpetration and victimization by age, sex, and hospitalization within 3 months of baseline.

Locations of Violence

Adults with mental illnesses were significantly more likely to perpetrate community violence in private settings than in public settings ($P < .001$). Approximately two thirds

of incidents (63.5%) took place in residential settings, either in the participant's home (48.9%) or another private residence (14.6%). One quarter of the incidents (25.7%) were perpetrated in public settings, including outdoors (20.5%), a bar or restaurant (3.5%), or a commercial setting (e.g., store; 1.7%). Fewer incidents (6.6%) were perpetrated in treatment settings (1.4% in outpatient settings, such as community clinics, and 5.2% in inpatient settings). The remainder occurred at school or work (2.6%), in jail or prison (0.2%), or other settings (0.9%).

DISCUSSION

The increased risk for violence perpetration and victimization associated with mental illness represents a substantial public health concern; however, these 2 outcomes have rarely been examined in the same sample of adults with mental illnesses during the same timeframe. Pooling data from 5 studies, we addressed this empirical gap by investigating the prevalence and co-occurrence of violent outcomes during a 6-month period in a large, heterogeneous sample of adults with mental illnesses. This study represented the largest evaluation of the prevalence, nature, and associations of community violence perpetration and victimization in this population.

Overall, results showed a high 6-month prevalence of community violence perpetration and victimization—approximately one quarter of participants (23.9%) perpetrated violence and one third of participants (30.9%) were victims of violence, although prevalence differed considerably across studies. These rates fell within the 12-month prevalence ranges for violence perpetration (11%–52%)^{1–6} and victimization (20%–44%)^{12–15} found in previous research. The findings also provided further evidence that adults with mental illnesses experienced violence, both perpetration and victimization, at rates higher than those reported in community and US general population samples.^{2,35,36}

Differences in community violence perpetration and victimization were seen as a function of participant age and sex, as well as primary diagnoses, highlighting the heterogeneity and variability within this high-risk population. Younger participants and women reported significantly higher rates of violence

TABLE 2—Physical Injuries Resulting From Violence Perpetration and Victimization Among Adults With Mental Illnesses: Five Studies in the United States, 1992–2007

Variable	Sample Who Perpetrated Violence Resulting in Injuries to Others (n = 4075)		Perpetrators Who Caused Injuries		Sample Who Reported Victimization Resulting in Injuries to Participant (n = 1460)		Victims Who Reported Victimization-Related Injuries	
	%	P	%	P	%	P	%	P
Overall	8.7	< .001	34.7	< .001	7.5	< .001	39.3	< .001
Study		< .001		< .001		...		
F-PAD	12.2		48.3		
MacRisk	16.6		38.3		
SCAP	—		
MacMandate	4.2		21.5		
CATIE	4.7		31.1		7.5	< .001	39.3	< .001
Age, y		< .001		.09				.94
≤ 39	12.4		36.2		9.7	.01	39.5	
≥ 40	4.5		30.5		6.0		39.1	
Sex		.06		< .001		.95		.98
Male	9.4		39.5		7.5		39.3	
Female	7.7		28.5		7.6		39.2	
Race/ethnicity						.58		.85
White	8.2		30.0		6.9		39.1	
Black	10.2		37.8		8.7		40.0	
Hispanic	7.4		37.3		7.6		41.9	
Other	5.4		26.5		4.9		27.3	
Primary diagnosis		< .001		.35	
Schizophrenia	5.6		32.9		7.5		39.3	
Bipolar disorder	8.4		30.8		
Major depression	13.1		35.4		
Substance use disorder	22.4		41.5		
Other	12.7		34.2		
Hospitalized in previous 3 mo		< .001		.02		< .001		.11
Yes	14.6		37.5		11.9		45.3	
No	4.8		30.2		5.9		35.6	

Note. CATIE = Clinical Antipsychotic Trials of Intervention Effectiveness; F-PAD = Facilitated Psychiatric Advance Directive study; MacMandate = MacArthur Mandated Community Treatment study; MacRisk = MacArthur Mental Disorder and Violence Risk study; SCAP = Schizophrenia Care and Assessment Program. Percents are valid percentages. Numerical discrepancies reflect missing data.

perpetration than older participants and men, respectively. The age difference was in agreement with results of previous studies on violence perpetration in adults with mental illnesses, as well as in the general population.^{3,11,26,38} In contrast, with respect to sex, research typically showed equal or greater risk of community violence perpetration in men compared with women in adults with mental illnesses^{11,26,39–41} and in the general population.⁴² However, the sex differences we observed might reflect our operationalization of violence. Research that found higher overall rates of violence perpetrated by women

compared with men, including the present study, also showed comparable or higher rates of more serious forms of violence perpetration (e.g., resulting in injury) among men.⁴³ Additionally, women were more likely to be injured than were men, a finding consistent with results of previous research.⁴⁴ That said, as noted elsewhere, high rates of female violence in this population might reflect increased opportunity; women with mental illness were more likely to live with family, and men were more likely to live alone.⁶ Given the preponderance of violence perpetrated in residential settings in the present study, the higher rates

of female violence might reflect such increased opportunities for conflict in the home. However, the higher rates of female violence also might reflect our use of self-reported data rather than official, criminal justice records (e.g., police records). Specifically, previous research suggested that women might be more likely to disclose violence-related experiences (perpetration and victimization) compared with men,^{44,45} and that rates of female crime might be under-represented in official records.^{40,46}

In contrast with the predominant focus on the dangerousness of adults with mental

TABLE 3—Statistical Associations Between Community Violence Perpetration and Victimization Among Adults With Mental Illnesses: Five Studies in the United States, 1992–2007

Participant Characteristics	No.	Partial Correlations	OR (95% CI)
Overall	4474	0.50	12.19 (10.34, 14.35)
Age, y			
≤ 39	2357	0.50	10.24 (8.28, 12.66)
≥ 40	2110	0.46	12.93 (9.73, 17.18)
Sex			
Male	2677	0.52	14.24 (11.39, 17.81)
Female	1797	0.48	10.10 (7.90, 12.90)
Race/ethnicity			
White	2297	0.52	13.49 (10.67, 17.07)
Black	1683	0.51	12.53 (9.63, 16.30)
Hispanic	317	0.39	7.37 (3.96, 13.73)
Other	172	0.37	6.42 (2.88, 14.28)
Primary diagnosis			
Schizophrenia	2833	0.50	15.22 (12.04, 19.25)
Bipolar disorder	428	0.45	8.73 (5.37, 14.19)
Major depression	824	0.45	7.50 (5.42, 10.39)
Substance use disorder	272	0.51	12.35 (6.50, 23.46)
Other	110	0.37	5.38 (2.25, 12.86)
Hospitalized in previous 3 mo			
Yes	1773	0.48	9.32 (7.39, 11.76)
No	2700	0.47	13.47 (10.60, 17.11)

Note. CI = confidence interval; OR = odds ratio. All effects calculated controlling for study of origin. Numerical discrepancies reflect missing data. All $P < .001$.

illnesses, participants in the present study were significantly more likely to report being victimized than they were to report being violent. Consistent with previous research that showed higher rates of victimization than perpetration in separate samples, our investigation was one of the few studies that directly compared the prevalence of these 2 violent outcomes in the same sample and timeframe, thereby providing more definitive evidence. Moreover, almost two thirds of violent incidents (63.5%) perpetrated by adults with mental illnesses occurred in residential settings; comparatively few incidents (approximately 1 in 4) occurred in public settings, and even fewer (2.6%) occurred in school or work settings. These data provided some insight into the broader social–environmental context within which community violence was perpetrated by adults with mental illnesses, and importantly, highlighted the prevalence of victimization.

Although the majority of adults with mental illnesses do not perpetrate violence, the devastating impact of violence in this population is not to be minimized. Our data and previous findings^{9,11} showed increased risk of violence associated with mental illness. Consequently, practitioners working with adults with mental illnesses should not only use evidence-based approaches to assess and manage violence risk, but also should consider risk for victimization. Moreover, the strong association between violence perpetration and victimization suggested that interventions addressing both outcomes should produce the greatest public health benefits.⁴⁷ Although many instruments exist for assessing and managing violence risk posed by adults with mental illnesses, such as the Historical-Clinical-Risk Management-20,⁴⁸ the Violence Risk Appraisal Guide,⁴⁹ and the Classification of Violence Risk,⁵⁰ we were aware of only 1 instrument, the Short-Term Assessment of Risk and Treatability,⁵¹ that

guides the assessment of risk for both perpetration and victimization.

The present study was limited in several ways. First, the data were cross sectional and did not afford analyses of incidence. Second, studies were mixed in terms of their inclusion of inpatient and outpatient samples. Although this increased generalizability of our findings, it also introduced potential confounders. For example, inpatients retrospectively reported violence that occurred before their hospitalization, which might represent lengthy periods of time, whereas outpatients recalled experiences immediately preceding the interview. Studies also were mixed in their assessment of repeat incidents, injury, and location, precluding some analyses and comparisons. Third, we focused on prevalence of violence, rather than what transpired during the violent interactions. Incidents of both perpetration and victimization might have occurred during the same interaction; with the current data, we were unable to determine which occurred first. Fourth, our violence data were derived from self-report and might be susceptible to recall bias and errors, as well as social desirability. However, self-report remains a valid and reliable method for collecting sensitive data, including violence and victimization, in this population.^{6,52–54} Fifth, data on inter-rater reliability were not available, although detailed descriptions of interviewer training were provided elsewhere.^{43,55} Sixth, we focused on primary diagnoses of mental illness to the exclusion of co-occurring disorders, comorbid personality disorders (e.g., antisocial personality disorder, psychopathy), and substance use disorders, in particular.

In conclusion, our results provided further evidence that adults with mental illnesses experienced violent outcomes in the community at high rates. They also indicated that adults with mental illnesses were more likely to be victims than perpetrators of community violence. There are many factors that should be explored to better understand the prevalence of and association between community violence perpetration and victimization in this population, such as comorbid diagnoses, poverty, and neighborhood factors. Moreover, in addition to focusing on the risk for violence associated with mental illness, there is a critical need for the development, implementation,

and evaluation of interventions designed to reduce violence victimization and perpetration among this vulnerable population. ■

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Contributors

S. L. Desmarais oversaw and led all aspects of the article, including planning and analyzing data, interpreting results, and writing the article. R. A. Van Dorn coded and analyzed the data, with assistance from K. L. Johnson, and drafted sections of the article. K. L. Johnson, K. J. Grimm, K. S. Douglas, and M. S. Swartz contributed to interpreting results and revisions of the article.

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Human Participant Protection

Protocols of the original studies were approved by relevant institutional review boards. The North Carolina State University, RTI International, and University of

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