Mental Illness and Police Interactions in a Mid-Sized Canadian City: What the Data Do and Do Not Say

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ABSTRACT

This study examines the quantity and nature of police interactions for people with mental illness in London, Ontario, Canada, in 2001. An algorithm designed for a police services administrative database was used to identify 817 people with mental illness and 111,095 people without mental illness. Charges and arrests were examined using 100 randomly selected records. People with mental illness had 3.1 more police interactions on average than the general population, and they were more

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frequently charged and arrested. As police officers became more familiar with the individuals, they were not much more likely to identify them as violent even when a person with mental illness had been a violent perpetrator.

The increased use of mental health courts (Burvill, Dusmohamed, Hunter, & McRostie, 2003; Christy, Poythress, Boothroyd, Petrila, & Mehra, 2005; Cosden, Ellens, Schnell, & Yamini-Diouf, 2005; Herinckx, Swart, Ama, Dolezal, & King, 2005; Hiday, Moore, Lamoureaux, & deMagistris, 2005; Trupin & Richards, 2003) along with journal issues dedicated to violence and mental illness (e.g., *Social Psychiatry and Psychiatric Epidemiology*, 1998, Vol. 33, Suppl. 1; *American Journal of Psychiatry*, 2006, Vol. 163, Issue 8) and commissioned critical appraisals of this literature (Arboleda-Florez, Holley, & Crisanti, 1996) suggest a growing interest in how people with mental illness behave and are treated in the community. A potential relationship between serious mental illness and violence is especially relevant as communities continue to experience the effects of deinstitutionalization (Accordino, Porter, & Morse, 2001; Sealy & Whitehead, 2004). A summary of previous research on mental illness and violence noted that studies using a variety of methods have shown an increased risk for violence among people with mental illness (Appelbaum, 2006). However, others have questioned the methods used to link mental illness and violence (Anderson, 1997; Arboleda-Florez, Holley, & Crisanti, 1998; Davis, 1991; Hiday, 2006). The nature of the association between mental illness and violence can help inform which community services are indicated.

Research on the experiences of people with mental illness and the police does not support the use of the police as a first line therapy for mental illness (Arboleda-Florez & Holley, 1988; Wachholz & Mullaly, 1993); nevertheless, data from the United States indicate that the proportion of police contacts with people who have a mental illness is much higher than the prevalence of mental illness in the population (Teplin, 1984). In a Canadian study of patients admitted four or more times to psychiatric facilities, the rate of police contact was four times greater than would be expected for the general population (Finlayson, Greenland, Dawson, Blum, & Pittman, 1983; Schellenberg, Wasylenki, Webster, & Goering, 1992). British data show that people with mental illness are arrested and jailed for relatively minor offences at a higher rate than their non-mentally ill counterparts (Robertson, 1988), while other studies indicate that people with mental illness have a higher arrest rate than the general population (McFarland, Faulkner, Bloom, Hallaux, & Bray, 1989; Robertson, Pearson, & Gibb, 1996; Schellenberg et al., 1992). In fact, Schellenberg et al. concluded that "between one-third to one-half of psychiatric patients have been arrested at some point" (1992, p. 262). However, a Canadian study of criminal activity among individuals discharged from a psychiatric hospital (more than two thirds had been diagnosed with schizophrenia) found an unstandardized arrest rate of 3.84 per 100 persons versus 11.35 per 100 persons for the general population, supporting the contention that people with mental illness are not more prone to engage in criminal activities than the general population (Lafave, Pinkney, & Gerber, 1993).

Police were more likely to arrest people with mental illness if police viewed their behaviour as violent, but these offenders were subsequently not charged with violent offences (Robertson et al.,

1996). Moreover, studies in both Canada (Smallacombe, 1981) and the United States (Bonovitz & Guy, 1979; Hiday, 1992; Steadman, Vanderwyst, & Ribner, 1978) have noted that people with mental illness often commit less serious offences, such as public disturbances or minor property offences. However, other Canadian studies have found evidence that individuals with mental illness do engage in violent acts (Morissette, 1986). For example, researchers in Edmonton studying a sample of 1,200 randomly selected residents found that "higher than expected proportions of those exhibiting violent behaviour had a psychiatric diagnosis," leading them to conclude that "psychiatric disorders have a strong relationship to violent behaviour" (Bland & Orn, 1986, p. 129). Both the study's authors and other Canadian commentators recognized that those findings could not be used to infer a causal relationship between mental disorder and violence (Arboleda-Florez et al., 1996). Even studies of whether violent criminality can be associated with mental illness in general or with a particular diagnosis within offender populations presented apparently inconsistent results (Ashford, 1989; Beaudoin, Hodgins, & Lavoie, 1993; Brownstone & Swaminath, 1989; Coid, Lewis, & Reveley, 1993; Côté & Hodgins, 1992; McKnight, Mohr, Quinsey, & Erochko, 1966; Raine, 1993; Siomopoulos, 1978) and provided no clear link between diagnosis and violence within incarcerated populations (Arboleda-Florez et al., 1996).

Previous research has cautioned that lessons for Canada are difficult to generalize from American studies (Borzecki & Wormith, 1985; Davis, 1992). Using administrative police data from Canada, the present study aims to extend previous research by answering the following questions:

1. Do people with mental illness have more police interactions than people who do not have mental illness?
2. Are people with mental illness more often charged and arrested than other citizens?
3. Are they more frequently flagged by police as violent (using a violent caution flag)?
4. Are people with mental illness who have been flagged as violent more likely to have been violent perpetrators?

The answers to these questions will clarify how the quantity and nature of police interactions with people who have mental illnesses differ from interactions with the general population, and may raise further questions about the role of violence as the main explanation (Hiday, 1997; Link, Phelan, Bresnahan, Stueve, & Pescosolido, 1999). We discuss our findings using a criminological framework for research on mental health policy and services that considers other reasons for involvement with police in addition to criminalization (Fisher, Silver, & Wolff, 2006).

METHODS

Study Population and Design

We conducted our study in London, Ontario, Canada, using a retrospective observational design involving comprehensive police services data from January to December 2001. The administrative database, maintained by the London Police Service (LPS), contains data on all recorded police interactions with citizens. The LPS prepared the administrative data, which excluded minors, and assigned anonymous identifiers so that no individual could be identified. The researchers were then given the

data to be analyzed in a secure setting. To track charges and dispositions at an individual level, we conducted a more intensive text-based search of 100 randomly selected computerized records which were analyzed by one of the authors in her capacity as supervisor of the LPS Family Consultant/ Victim Services Unit. The aggregate results were then shared with the rest of the research team. Given these arrangements, this study did not require approval from the University of Western Ontario's Health Sciences Research Ethics Board.

Data and Variable Definitions

To identify people with mental illness in the administrative database, we implemented a previously published algorithm (Hartford, Heslop, Stitt, & Hoch, 2005). Briefly, the algorithm first sorted people based on three indications of mental illness: addresses, key search words, and caution flags indicative of mental illness (e.g., addresses of provincial psychiatric hospitals, psychiatric wards in general hospitals, long-term psychiatric care homes, residences supported by community mental health housing agencies; keyword search terms such as "Mental Health Act," "Form 3," "not criminally responsible," or "psychiatric disability"; and police flags for mental instability, suicide, mental disability, and senility). If the algorithm indicated that a person might be living with a mental illness, the evidence was then categorized into one of three assessments, from highest to lowest confidence. For this analysis, people not identified as having a mental illness were compared with people identified as having a mental illness in the "definite" or highest confidence category.

The algorithm was designed to search through an administrative police database to identify people with a particular health problem. Clearly, the algorithm will miss some individuals with a mental illness (false negatives) and incorrectly classify others who do not have a mental illness (false positives). An important "problem" area is the address field. People with mental illness who are homeless or who are living at home might not be flagged unless their "home" address is a current or historical address of a provincial psychiatric hospital, a psychiatric ward in a general hospital, or a residence supported by a community mental health housing agency. Also, what can be located by a keyword search strategy might be affected by the different styles of police officers when relating to psychologically disordered and disruptive individuals (Green, 1997; Patch & Arrigo, 1999).

We examined the three most common types of police interactions: (a) complaints, (b) occurrences, and (c) tickets. Information received by the LPS (e.g., criminal activity, neighbourhood problems, motor vehicle accidents) is initially called a *complaint*, assigned a number, and entered into the computer dispatch system. All complaints are investigated and, depending upon the type, the investigating officer can document an interaction in a more formal report called an *occurrence* (for future reference or because a charge was laid). Thus, occurrences are a subset of complaints. A *ticket* refers to a provincial offence notice (e.g., traffic violations or trespassing) or a city bylaw infraction (e.g., creating public disturbances or noise violations).

Identifying "violent" perpetrators. In addition to variables such as age and gender, the administrative data also contained information we used to define perpetrators. We defined people as perpetrators if they were charged or arrested, or if they were the principal subjects in an occurrence (i.e., not

a victim, witness, or missing person). We defined "violent" perpetrators as perpetrators involved in a violent interaction with police. A violent interaction was identified in the following way.

All police services in Canada use standardized codes defined within the Uniform Crime Reporting (UCR) system to describe police interactions. With input from the police, we defined interactions as violent if they had UCR codes indicating a crime against a person: homicide, attempted murder, robbery, sexual assault, other sexual offences, major assault, common assault, utterance of threats, criminal harassment, or other crimes against a person. Thus, all violent perpetrators were involved in a violent interaction, but not all people involved in violent interactions were violent perpetrators.

Caution flags for violence. All North American police have access to computerized databases that use a series of electronic caution flags attached to an individual's name for internal communication (Canadian Police Information Centre, 2002; U.S. Department of Justice, 2000). Caution flags appear on both local and national databases. These flags identify individuals considered to pose a potential danger to the public, themselves, or police. For the analysis, we used the caution flag for "violence." Specific criteria must be met prior to attaching a flag. All recommendations to identify an individual with a national-level caution flag are reviewed by a senior-ranking officer prior to entry into the database. Officers receive training on the application of flags at police colleges and from their local police service.

Outcomes of police interactions. The administrative database indicated whether police interactions resulted in a charge or an arrest. To obtain more detailed information about how people proceeded through the criminal justice system (e.g., "guilty" decisions and sentences), we randomly selected the records of 100 people with mental illness from our study sample. The charge and disposition data were coded to facilitate comparison with the adult criminal court statistics for all of Canada throughout 2001–2002 (Robinson, 2003).

Data Analyses

When analyzing data about individuals with more than one police interaction, we used the information found in each of their police interactions to construct the most stringent profile. For example, a person with police interactions on three separate occasions involving (a) witnessing a violent interaction, then (b) perpetrating a violent interaction and, finally, (c) committing a nuisance crime would be categorized as a violent perpetrator (see Figure 2) and a violent perpetrator without a violent flag (see Figure 3).

We used *t*-tests and Wilcoxon rank sum tests to explore the statistical differences between the two groups: people with mental illness (PMI) and people without mental illness (NPMI). Because of the large sample size ($n > 111{,}000$), all differences were highly statistically significant. Thus, we report observed differences for the purposes of judging whether they are meaningful.

RESULTS

Between January and December 2001, the police had at least one interaction with 111,912 individuals in London, Ontario. Of those, we identified 817 people who met the criteria for PMI. The

NPMI category contained 111,095 people. In 2001, London had 362,945 persons in family households (Statistics Canada, 2005).

Demographics

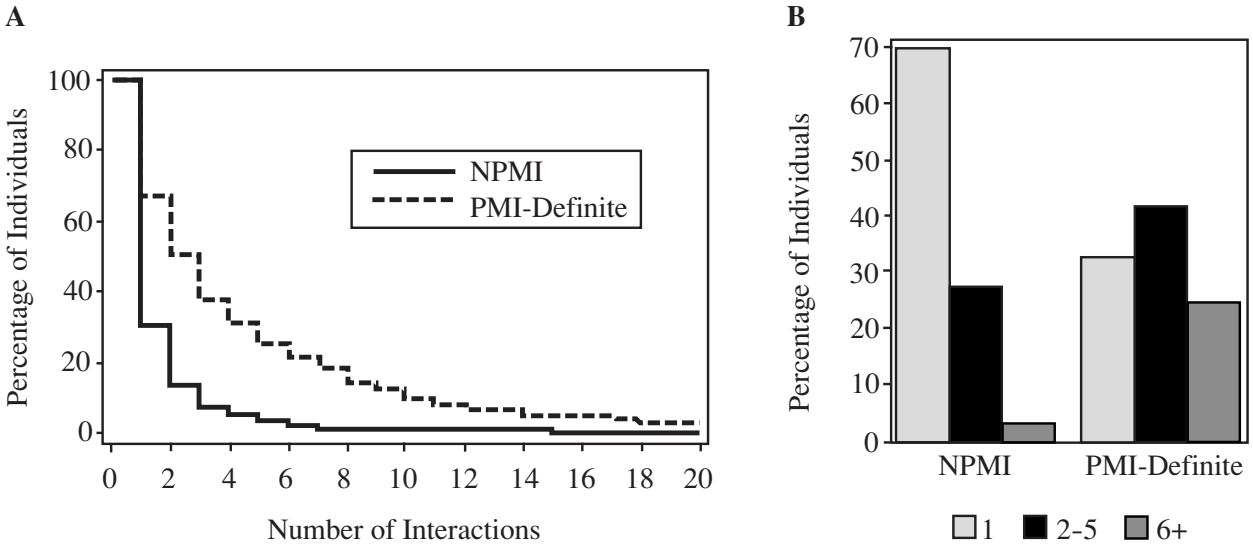
The average ages for individuals in the PMI and NPMI groups were similar (36 versus 38 years old); however, the PMI group had 9% more males than the NPMI group (68.7% vs. 59.8%).

Police Interactions

Figure 1 (A and B) illustrates the frequency of police interactions with individuals in the PMI and NPMI groups. People with mental illness had more police interactions than people without mental illness, as illustrated in Figure 1A. Figure 1B shows the different distributions for the PMI and NPMI groups. Over two thirds of people without mental illness had one-time police interactions, but over two thirds of people with mental illness had more frequent police interactions (i.e., 2–5 police interactions or 6+ police interactions). Overall, people with mental illness had 3.1 more police interactions on average than people without mental illness (4.8 vs. 1.7). Individuals with mental illness had greater percentages of complaints, occurrences, and tickets. For example, they had almost 3 more complaints on average than individuals without mental illness (4.3 vs. 1.4). The other types of police interactions exhibited similar patterns.

Figure 1

Percentage of Police Interactions in 2001 by Mental Illness Group, Shown (a) Cumulatively and (b) Categorically



Note. PMI-Definite = people identified by an algorithm as having mental illness (using only the highest level of certainty definition). NPMI = people without mental illness.

Arrests and Charges—All Involvements

Table 1 presents arrests made and charges laid for the PMI and NPMI groups. The three outcome categories "ever arrested (not charged)," "ever charged (not arrested)," and "ever arrested, charged" are not mutually exclusive. For example, a person involved in police interactions may be charged but not arrested, and later arrested but not charged. The last category, "ever arrested, charged," indicates having been charged and arrested either as the result of one or multiple police interactions (e.g., first time charged only, second time arrested only, or one interaction involving being arrested and charged). Overall, people with mental illness were arrested but not charged more often than those without mental illness (13.0% vs. 1.0%). Conversely, they were charged but not arrested less often (20.9% vs. 25.4%). In general, people with mental illness were arrested, charged, or both 10% more often than those without mental illness (37.9% vs. 27.9%). As the number of police interactions increase in the "ever arrested (not charged)" and "ever arrested, charged" categories, so do the outcome percentages. However, the increases happen at different rates for the PMI and NPMI groups (as indicated by the difference column in Table 1).

The Role of Violence: Violent Incidents, Perpetrators, and Flags

Figure 2 presents police interactions using four mutually exclusive categories. Two categories involve violent incidents. A person involved in a violent incident as a perpetrator was labelled a violent perpetrator (VP); alternatively, a person could be involved in a violent incident (VI) but not as a perpetrator (perhaps as a witness, a victim, or a missing person). A third category (VF) involves people designated by the police with a violent flag, and a fourth category includes people who had none of these designations (None). As indicated by the larger slices in Figure 2, people with mental illness were more likely to be involved in violent interactions as perpetrators and in other roles.

Figure 2 offers an aggregated summary using only four categories. In Figure 3, we stratify the categories by whether an individual was flagged as violent. Figure 3 illustrates the six possible permutations given the violent flag, violent interaction, and violent perpetrator indicators. Nearly 20% of people with mental illness had a violent flag but were neither violent perpetrators nor involved in a violent incident. In contrast, 2% of those without mental illness had a violent flag but were neither violent perpetrators nor involved in a violent incident. Both groups, PMI and NMPI, had similar violent incident percentages regardless of violent flag status. However, there were large differences in violent perpetrator percentages between the PMI and NPMI groups *regardless* of violent flag status. For example, 14% more PMI considered violent perpetrators were flagged as violent (15% vs. 1%), and 10% more PMI considered violent perpetrators were not flagged as violent (11% vs. 1%). A closer examination of individuals who were not flagged as violent revealed that for PMI and NPMI with only one police interaction, 18.8% and 0.4% were violent perpetrators, respectively. For PMI and NPMI with six or more police interactions (still without a violence flag), 20.7% and 6.3% were violent perpetrators, respectively.

Table 1

Percentage and Number of People Arrested and/or Charged by PMI (*n* = 817) or NPMI (*n* = 111,095) Status, 2001

Outcome categories[a]	NPMI (*n* of *N*)	PMI (*n* of *N*)	NPMI – PMI Difference
Ever arrested (not charged)			
Number of police interactions			
1	0.3% (230 of 77,400)	2.2% (6 of 269)	-1.9%
2–5	1.5% (461 of 30,257)	11.4% (39 of 343)	-9.9%
6+	10.7% (369 of 3,438)	29.8% (61 of 205)	-19.1%
Overall	1.0% (1,060 of 111,095)	13.0% (106 of 817)	-12.0%
Ever charged (not arrested)			
Number of police interactions			
1	17.9% (13,831 of 77,400)	3.0% (8 of 269)	14.9%
2–5	41.2% (12,455 of 30,257)	18.4% (63 of 343)	22.8%
6+	54.7% (1,882 of 3,438)	48.8% (100 of 205)	5.9%
Overall	25.4% (28,168 of 111,095)	20.9% (171 of 817)	4.5%
Ever arrested, charged[b]			
Number of police interactions			
1	19.2% (14,843 of 77,400)	8.6% (23 of 269)	10.6%
2–5	45.9% (13,875 of 30,257)	39.1% (134 of 343)	6.8%
6+	65.2% (2,243 of 3,438)	74.6% (153 of 205)	-9.4%
Overall	27.9% (30,961 of 111,095)	37.9% (310 of 817)	-10.0%

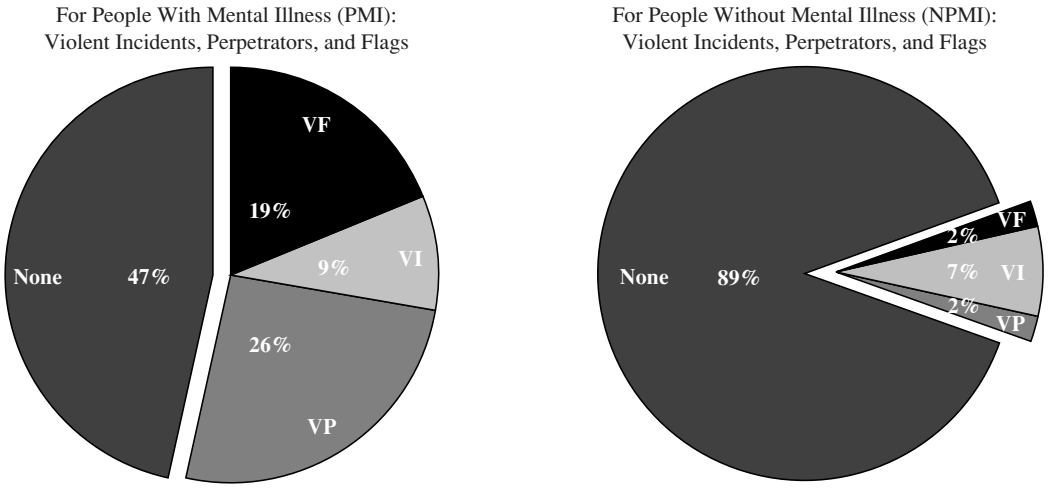
Note. NPMI = people without mental illness. PMI = people with mental illness.

[a]The three outcome categories are not mutually exclusive. A person with multiple police interactions might have been charged once (but not arrested) and arrested once (but not charged). This person would be represented in all three categories.

[b]This category contains people who have been charged and arrested as a result of either one police interaction or multiple police interactions (e.g., first time charged only; second time arrested only).

Figure 2

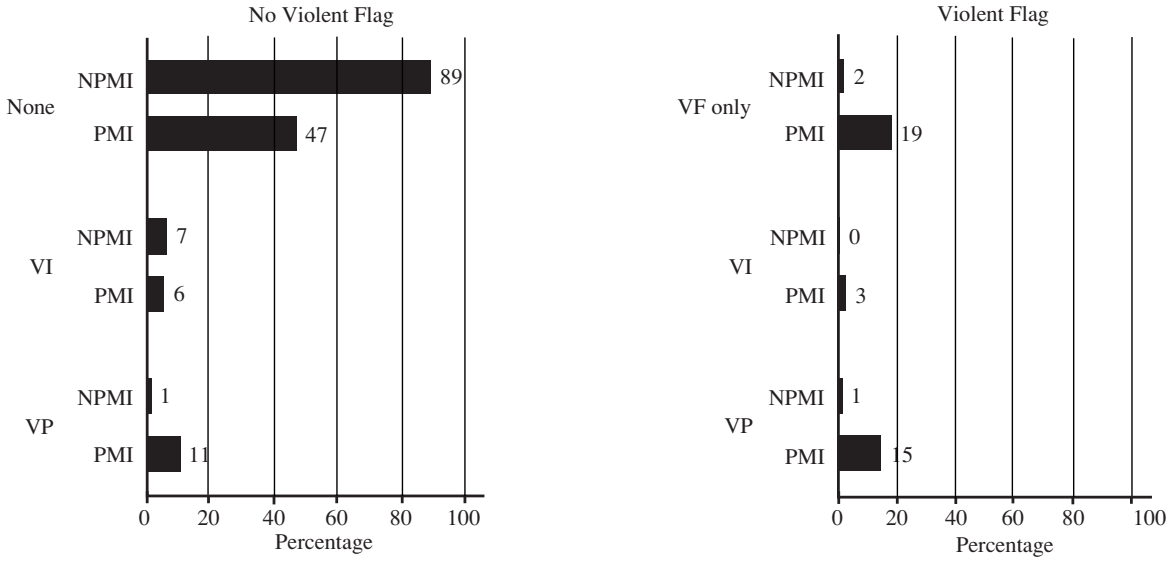
Police Interactions and the Role of Violence by Mental Illness Groups, 2001



Note. VI = violent incident. VP = violent perpetrator. VF = violent flag. None = no VI, no VP, and no VF.

Figure 3

Police-Assigned "Violence" Flags by Mental Health Status, 2001



Note. PMI = people with mental illness. NPMI = people without mental illness. VI = violent incident. VP = violent perpetrator. VF = violent flag. None = no VI, no VP, and no VF. Percentages based on n = 817 for PMI and n = 111,095 for NPMI.

Charges and Dispositions

A random sample of 100 people with mental illness indicated that 40% of the charges were for minor nuisance offences (e.g., provincial offence notices and administration of justice offences). Thirty-seven percent of people with mental illness who were charged spent time in custody before they were found guilty or innocent, and 57% who were found guilty were sentenced to time in prison. In contrast, 34% of the convicted Canadian population was sentenced to prison (Robinson, 2003). Lastly, 72% of the PMI sample was found guilty compared to an overall Canadian average of 60%. Of this group, 57% spent some time in prison compared to the overall Canadian average of 34%.

DISCUSSION

Our main findings are that among people with police contact, those with mental illness are (a) more likely to have had more police interactions, (b) more likely to be arrested and charged, (c) more likely to be flagged as violent, and (d) slightly more likely, if they were flagged as violent, to be violent perpetrators than PMI without a violent caution flag. These results confirm previous findings that people with mental illness have more interactions with the police (Deane, Steadman, Borum, Veysey, & Morrissey, 1999; Lamb, Shaner, Elliott, DeCuir, & Foltz, 1995; Steadman et al., 2001; Wolff, 1998). Are these findings related to the documented statistical association between mental illness and violence (Arboleda-Florez et al., 1998; Tehrani, Brennan, Hodgins, & Mednick, 1998)? Relative to the NPMI group, 33% more PMI had a violent caution flag (36.1% vs. 3.3%). However, this did not translate into 33% more violent perpetrator interactions in the PMI group. In fact, we observed 24% more (25.7% vs. 1.8%).

As illustrated in Figure 3, the 26% of people with mental illness who were involved with police as violent perpetrators were as likely to be flagged as violent (15%) as not (11%). These results suggest the violence flag was not always a good indicator of whether an individual might be a violent perpetrator. As the number of interactions between PMI and the police increased, police perceptions of violent behaviour did not seem to change. The percentages of PMI violent perpetrators without a violent flag were 18.8% for one-time police interaction and 20.7% for 6+ police interactions. Why would the police not flag violent perpetrators with mental illness who were well known to them? Perhaps the police were making a distinction between “criminal” violence and violent behaviour associated with a person’s illness. Conversely, among PMI with a violent flag, 59% were not violent perpetrators and nearly half had not been part of a violent interaction.

These results can also be viewed from a criminology perspective (Fisher et al., 2006). Do people with mental illness, identified in this study, have characteristics associated with criminality (e.g., life-course trajectories, local life circumstances, or routine activities)? Unfortunately, much of the information needed to answer this question is not accessible in the police services administrative database that we used. Nevertheless, the data do provide clues regarding criminality. Assuming a prevalence of severe mental illness of 1%, we would expect about 3,629 people in London to have a severe mental illness (0.01 with severe mental illness x 362,945 people in London = 3,629 people). However, our dataset contained only 817 people with mental illness who had any police interaction, which represents

about 23% of the total population of PMI (817 / 3,629 22.5%); con versely, about 31% (111,095 / (362,945 – 3629) 30.9%) of the NPMI g roup had police interaction. If having a severe mental illness were an independent risk factor for being an offender, one would expect people with mental illness to have a greater chance of having a police interaction, not less. This finding provides some support for Hiday's (1997) causal model, which hypothesizes that there is no direct link between severe mental illness and violence.

From the individuals who do have police interactions, it is possible to catch glimpses of the three categories of mentally ill offenders discussed in the criminology literature (Fisher et al., 2006; Hiday, 1999). These categories include (a) those committing minor offences often involving survival behaviours, (b) those committing criminal offences because of accompanying character disorders and substance misuse issues, and (c) those committing criminal offences because of their psychiatric symptoms. Evidence of mentally ill offenders committing "survival crimes" may be found in Table 1 as PMI who were arrested (e.g., for shoplifting, trespassing, disturbing the peace) but not charged more often than NPMI. Evidence of PMI with a propensity to offend because of criminal tendencies (and not because of their mental illness) can be found in the fact that approximately 15% of all PMI had a violence flag and perpetrated a violent incident.

Focusing on the violent flag indicator may help us to distinguish people with mental illness who commit violent acts because of criminal tendencies from those who commit violent acts because of psychiatric symptoms. Nearly 41% of all PMI who were flagged as violent were violent perpetrators as well, and the percentage of violent perpetrators increased from 22.4% for people with one police interaction to 55.8% for people with 6+ police interactions. Thus for those PMI flagged as violent, more police activity seemed to be associated with a much greater chance of being a violent perpetrator (this was true for NPMI as well). In contrast, about 17% of all PMI who were not flagged as violent were violent perpetrators (even though they were not flagged as violent), but the percentage of violent perpetrators did not differ much for people with one police interaction (18.8%) or 6+ police interactions (20.7%). For PMI without a violent flag, a large increase in police interaction did not appear to be motivated by a correspondingly large increase in propensity for violence. This is not true for NPMI without a violent flag. As their police interactions increased from one to more than six, the percentage classified as violent perpetrators became 15 times larger (from 0.4% to 6.3%). This finding is consistent with NPMI having more police contact when their actions warranted it (i.e., when they were more likely to be violent perpetrators). In stark contrast, the relatively constant (but elevated) percentage of PMI violent perpetrators in the various categories of police interaction may mark PMI who committed a violent act because of their disease. The finding that the violence flag is not always a good indicator of whether an individual could be a violent perpetrator may help distinguish the second and third categories of offenders (i.e., mentally ill people who are committing crimes because they are criminals from mentally ill people who are committing crimes because they are untreated). Clearly, different services are needed for different categories of offenders if society desires different outcomes.

In our sample of the charges laid in 2001 against 100 people with mental illness, 21% were for crimes against property and 29% were for crimes against people, rates that closely compare to 23%

and 27% Canada-wide. It is not clear why court findings of guilt among people with mental illness were higher (72% vs. 60%), or why, once found guilty, these individuals were jailed more frequently (57% vs. 34%). Perhaps the higher rate of imprisonment is related to homelessness (Aderibigbe, 1997; Martell, Rosner, & Harmon, 1995; Sullivan, Burnam, & Koegel, 2000). A greater percentage of PMI police interactions in general involved being arrested but not charged, whereas a greater percentage of NPMI police interactions involved being charged but not arrested. Typical offences that led to arrest without charge included disturbing the peace or arrests related to the Mental Health Act (e.g., an arrest for the purpose of being taken to the hospital). Thus, our findings may indicate a lack of options available to the police when citizens file complaints.[1]

We speculate that pre-conviction custody could occur for a number of reasons. Officers might detain people with mental illness because they believe that these individuals require psychiatric assessment that cannot be obtained otherwise. The officers may have exhausted other options, such as attempting to access hospitalization or support services, and may arrest and hold the person in custody to prevent the reoccurrence or continuation of an offending behaviour such as trespassing. The officer may believe that, if released, the individual will fail to appear in court or will continue the offending behaviour. Additionally, the person may be homeless and therefore have no address to be released to or funds for bail.

It is well established that a small minority of mental health and other patients consume a large proportion of health resources (Mustard, Derksen, & Tataryn, 1996; Roos, Shapiro, & Tate, 1989). Those with many police interactions consume large amounts of police resources (Arboleda-Florez et al., 1998) as officers try to de-escalate agitated behaviour or to access community and hospital services. Given that there are other community resources that might be more effective and less costly for achieving these goals, society may want to consider more cost-effective therapeutic alternatives (Hiday & Wales, 2003; Lamb & Weinberger, 1998). Indeed, our results based on 100 people with mental illness agree with studies in both Canada (Smallacombe, 1981) and the United States (Steadman et al., 1978; Swanson et al., 2001) noting that these individuals often commit less serious offences, such as public disturbances or minor property offences.

Nonetheless, our results also indicate that 26% of people with mental illness in this sample were violent perpetrators. Perhaps these results point to a cry for help or to an escalation of untreated illness. As mentioned above, our results suggest that once people with mental illness become known to the police, the officers may not view their violent acts in the same way as those committed by their non-mentally ill counterparts. In a survey of 138 police officers, Cotton (2004, p. 143) found "very few officers felt that the mentally ill should be isolated from the society and most felt that, as a society, we need to learn to be more tolerant toward the mentally ill."

Limitations

A formal test of whether mental illness causes violence would require one to specify a causal model that should include variables on substance misuse, psychopathy/antisocial personality disorder, victimization, and community disorganization (Hiday, 1995, 1997). However, Hiday (2006, p. 321)

observes that "each of these factors . . . has a high prevalence among persons with severe mental illness who are violent, which makes each a potential confounder in the association between severe mental illness and violence." Given that the administrative data we used for this study do not allow us to adjust for all of these important variables, our results do not establish a causal link between mental illness and violence. In addition, our results cannot be generalized to the population of all people with mental illness. Our results characterize the population of PMI who are involved with the police. Given the importance of the omitted confounding variables in predicting violence, it is possible that the increased police interaction by PMI reflects increased exposure to these risk factors. Viewed in this light, individuals with mental illness may be more vulnerable to risk factors associated with violence than the general population, as evidenced by an elevated rate of police interactions. This vulnerability suggests that people with mental illness in the community may need to receive additional help with problems that are risk factors for violence.

In summary, because the data come from an administrative source, we cannot answer questions such as "How much of the violence in the community can be attributed to mental illness?" (Arboleda-Florez, 1998). Furthermore, the data did not include diagnoses by a psychiatrist. As a result, though there is evidence that certain diagnoses such as substance abuse play a large role in arrests, violence, and police interactions (Swartz et al., 1998), the role of specific diagnoses in this population cannot be examined using these data. Rather than diagnoses, our dataset includes individuals who are identified by the legal system as having a mental illness. As a result, it is likely that people with mental illness are underrepresented in this study. It may be that the legal system only identifies individuals with positive symptoms of mental illness and underidentifies those with negative symptoms, because those with positive symptoms are more likely to have contact with the legal system. Clearly, the sample is selected from those who have police interaction. To the extent that individuals with mental illness possess characteristics associated with police contact (e.g., younger age, male sex, previous victimization, substance misuse issues), one would expect increased police interaction (Hiday, Swanson, Swartz, Borum, & Wagner, 2001; Hiday, Swartz, Swanson, Borum, & Wagner, 1999; Swartz et al., 1998).

IMPLICATIONS AND CONCLUSION

Canada is known for its inclusive health-care system with its tenet of universal access to health care. As a result, one would expect people in need of mental health care to have timely access to services (if they had a demand for it [Davis, 2002]). As newly diagnosed patients are treated in the community and psychiatric inpatients are discharged, community mental health care must be available. However, Forchuk and colleagues (Forchuk, Russell, Kingston-Macclure, Turner, & Dill, 2006), using 2002 data from London, Ontario, found the discharge of people from psychiatric wards to shelters or the street to be a recurring problem. Moreover, until recently there had been no new investment in Ontario's community mental health services in over a decade (Ontario Federation of Community Mental Health and Addiction Programs, 2005). The movement of patients from psychiatric hospitals to the community has led to a proliferation of individuals residing in the community without adequate supports (Sealy & Whitehead, 2004). This lack of community supports, combined with the dramatic

reduction in the number of psychiatric beds, may be forcing people with mental illness to receive "inpatient" treatment in jails and prisons (Lamb & Weinberger, 2005).

Lack of services places increased demands upon police. In Ontario, people can be arrested under the Mental Health Act (a "therapeutic" arrest) as well as for criminal behaviour. People with mental illness experience "intersystem parallelism" whereby police and mental health systems develop separate but overlapping ways to manage specific behaviours (Wolff, 1998). Frequently, the first indication of mental illness occurs when a person's behaviour attracts police attention. Bizarre behaviour often engenders fear in the person's family or in the general public. The police are called and a criminal or Mental Health Act (MHA) arrest occurs. In this way, police become the entry point into the mental health system (Deane et al., 1999; Lamb et al., 1995; Wolff, 1998), either directly with an arrest under the MHA or indirectly when asking for a psychiatric remand.

Failure of a mental health-care system may be indicated by use of police services as a substitute for more therapeutic alternatives. One consequence of increased police interaction is escalating law enforcement costs related to people living with mental illness; after adjusting for inflation, these costs are now two to three times higher than estimates from the 1970s and 1980s (Wolff, 1998). Frustrated with repeated nuisance calls and the lack of response from mental health agencies, police may use arrest as a last resort. Additional community resources directed at support and treatment might reduce the quantity of police interactions in this population and obviate the need for police interaction as a means of entry into the mental health system (Davis, 1991). In addition, the benefits could be enhanced by ensuring that mental health services are informed by insights from criminology (Fisher et al., 2006).

This study examined police interactions in London, Ontario, in 2001 to explore the relationship between mental illness and the use of police services. Secondly, we explored the nature of police interactions. People identified as mentally ill were higher users of police services than people who were not. The nature of the police interactions was qualitatively different for people living with mental illness. The elevated arrest rate for these individuals does not appear to be linked wholly to activities that warrant arrest in the general population. Perhaps it is linked to the limited options the police have when encountering people with mental illness. There is a distinction between using the police as a means of access to mental health services and as a line of therapy. Unfortunately, the police may always be an access point to mental health services; the challenge, then, is to improve access to therapy. Better strategies exist for treating people with mental illness in the community. This study suggests that routinely collected administrative data could play a part in identifying people whose health-care needs are not best served by the police. It is unclear why people with mental illness should not have access to the health care they need, especially in a country that prides itself on universal access to health care. Solutions that have been proposed include increased access to community-based services and case management services, enhanced police training, mobile mental health crisis services, and pre-arrest diversion programs.

NOTE

1. As Cotton (2004, p. 4) notes, "when we see people who are acting a little weird and we really don't want them around the front of our store, or our driveway, or at our kids' playground, what do we do? We call the police. And the police are supposed to . . . Do let us know if you have the answer to that question. They really can't arrest them because as far as I can tell, 'acting weird' isn't included in the criminal code."

RÉSUMÉ

Dans cet article, nous analysons le nombre et la nature des interactions qui ont été recensées en 2001 à London (Ontario) entre des policiers et des personnes ayant un problème de santé mentale. Au moyen d'un algorithme conçu pour une base de données de gestion des services policiers, nous avons établi 817 interactions impliquant des personnes ayant un problème de santé mentale, et 111 095 impliquant des personnes n'ayant pas de problème de santé mentale. De plus, pour étudier les accusations et les arrestations liées à ces interactions, nous avons examiné 100 dossiers choisis au hasard. Nos résultats montrent que, en moyenne, les personnes ayant un problème de santé mentale avaient été engagées dans 3,1 interactions de plus avec des policiers que les personnes n'ayant pas de problème de santé mentale ; les personnes ayant un problème de santé mentale étaient aussi plus souvent accusées et arrêtées que les autres. Nous avons également observé que, à mesure que les policiers se sont familiarisés avec les personnes ayant un problème de santé mentale, ils n'étaient pas beaucoup plus susceptibles de considérer celles-ci comme des individus violents même si elles l'avaient été auparavant.

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