Contact Between Police and People With Mental Disorders: A Review of Rates

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Objective: There is widespread belief that people with mental disorders are overrepresented in police encounters. The prevalence of such interactions is used as evidence of extensive problems in our health care and social support systems. The goal of this study was to estimate the rates of police arrests among people with mental disorders, police involvement in pathways to mental health care, and police calls for service involving persons with mental disorders.

Methods: A systematic review was performed with seven multidisciplinary databases. Additional studies were identified by reviewing the reference lists of all included records and by using the "related articles" and "cited articles" tools in the Web of Science database. Studies were included if they were published in peer-reviewed journals, reported primary research findings, and were written in English.

Results: Eighty-five unique studies covering 329,461 cases met inclusion criteria. Data reported in 21 studies indicated that one in four people with mental disorders have histories of police arrest. Data from 48 studies indicated that about one in ten individuals have police involved in their pathway to mental health care. Data reported in 13 studies indicated that one in 100 police dispatches and encounters involve people with mental disorders.

Conclusions: These estimates illuminate the magnitude of the issue and supply an empirically based reference point to scholars and practitioners in this area. The findings are useful for understanding how local trends regarding police involvement in the lives of people with mental disorders compare with rates in the broader research literature.

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Contemporary health care systems, social programs, and policing models have been designed in such a way that contact between people with mental disorders and the police is inevitable. Attending to mental health crises, working with witnesses and victims of crime, searching for those who have absconded from inpatient and residential care, and identifying people who have mental health needs and connecting them to services are the foreseeable duties for today's police officer (1,2). In addition, officers are called on to intervene in criminal acts—from public disturbances to more serious incidents involving threatened or actual violence—perpetrated by people exhibiting a variety of mental health problems, such as dementia, intoxication, intellectual disability, or serious mental illnesses (3).

To many police, interacting on a routine basis with people who have mental disorders is problematic (2). Police chiefs have asserted that officers should not be the mental health response agency of first resort and that mental health situations consume too much time of frontline officers, diverting precious resources from core law enforcement activities (4). For example, police officers routinely express concern about the amount of time spent waiting in hospital emergency rooms in combination with the prospect that individuals with mental disorders may not be admitted to inpatient care (1). Research has shown that contacts involving people with mental disorders place great demands on police resources

(5). Police officers express frustration with deficiencies in the health and social service systems that severely constrain their ability to resolve situations involving people with mental disorders in a timely and appropriate manner. Serious concerns have also been raised by people with mental disorders about police interventions, particularly those that involve the use of force (6,7).

Media and academic discourses suggest that these encounters are a common and growing phenomenon, or "crisis" (8), but how truly common are these interactions? Although published reviews have examined the prevalence of mental disorders in various criminal justice populations and settings, such as correctional institutions (9,10), there has been no synthesis of rates within the context of policing. This study took stock of general trends within the extant knowledge by examining the rates of interaction between police and people with mental disorders. Published data on the following three rates were synthesized: police arrests among people with mental disorders, police involvement in pathways to mental health care, and police calls for service involving persons with mental disorders.

METHODS

A systematic search was conducted in PubMed, PsycINFO, Web of Science, JSTOR, Criminal Justice Abstracts,

Sociological Abstracts, and the National Criminal Justice Reference Service. The search was first performed in September 2009 to scope the literature as part of a larger study focused on gathering self-reported data from people with mental illnesses about their encounters with the police. After the primary data were analyzed and published, the search was updated in June 2015 and more carefully analyzed for patterns. Combinations of the following terms were searched: (police* OR law enforce*) AND (bipolar* OR mania* OR mental ill* OR mental disorder OR schizophreni* OR psycho*). Searches with large numbers of records (>250) were narrowed by adding the interact* term. Additional studies were located by reviewing the reference lists of all included records and by using the related articles and cited articles tools in the Web of Science database.

Studies were included if they were published in peer-reviewed journals, reported primary research findings, and were written in English. No restrictions were placed on publication year or methodological design. Studies were excluded if they reported data in such a way that an exact numerator and denominator, used for calculating rates, could not be ascertained. In addition to studies that met general eligibility criteria, studies on arrest rates were included if they provided data on histories of arrest over the lifetime or over extended periods among persons with mental disorders and were excluded if they used only police-involved samples or examined arrest rates over a brief period (fewer than five years). Studies of rates of police involvement in care pathways were included if they reported data on the proportion of people who interacted with police on their way to inpatient or outpatient mental health services, including emergency or compulsory psychiatric care, and were excluded if they used only police-involved samples. Studies of police calls for service were included if they provided data on the proportion of police dispatches or encounters that involved people with mental disorders and were excluded if they focused only on use-of-force incidents, used only samples detained in police custody, or focused only on calls to police–mental health crisis teams. [The excluded studies are listed in a table in an online supplement to this article.]

For every included study, data about selected variables were extracted and entered into Excel and SPSS. Data were extracted by a research assistant and then verified by the author. Student's t tests, Spearman rank correlation, and analyses of variance were performed to assess differences in average rates across study characteristics. Because of the possibility that studies with exceptionally large samples—exceeding the combined samples of the remaining studies—would distort the findings, those studies were removed from calculations of the overall rates described in the text.

RESULTS

Data from smaller studies—those with fewer than 500 individual cases—were combined for summary in Tables 1–3. Rates that include all studies are reported in the tables. In total, 85

unique studies with 329,461 cases involving contact between the police and people with mental disorders were included and synthesized. Cases covered individuals and events.

Police Arrests of People With Mental Disorders

Arrest rates can provide an approximation of formal interactions between police and the community. In relation to police arrest histories, the search uncovered 22 studies that included 126,852 individuals with mental disorders (3,11–31) (Table 1). After removal of one study with a relatively large sample (N=73,579) (19), the overall results indicated that 25% of persons with mental disorders (13,304 of 53,273 individuals) have been arrested by police at some point in their lifetime.

All studies (k=22 studies) were from the United States, and most (k=14, N=96,037) reported data prior to 2000. On average, arrest rates were higher in studies with smaller (<500) samples (k=11, N=2,286, M=49%) than those with larger (≥500) samples (k=11, N=124,566, M=26%; t=4.15, df=20, p<.001). Arrest rates determined by self-report (k=9, N=76,867, M=51%) were, on average, higher than those ascertained through official criminal justice records (k=11, N=49,517, M=33%; t=2.16, df=18, p<.05). Average arrest rates did not differ significantly between studies that established mental disorders through official records (k=13, N=50,577, M=39%) or structured interviews (k=7, N=75,679, M=45%). Average arrest rates for samples drawn exclusively from institutional settings (k=6, N=2,126, M=61%), such as hospitals and residential care, were higher than those from non-institutional (k=10, N=78,750, M=38%) or combined (k=6, N=45,796, M=24%) samples (F=7.70, df=2 and 21, p<.01). Finally, average arrest rates were similar for studies focused on serious mental illnesses (k=12, N=121,467, M=40%), such as schizophrenia or bipolar disorder, or a broader range of disorders (k=10, N=5,385, M=41%).

Although formal subgroup analysis could not be performed on the data set, the included studies suggest that a number of factors were associated with an increased rate of police contact by means of arrest among persons with mental disorders, including male gender (11,13,14,18,30), black race (13,24), bipolar disorder and manic symptoms (11,13), involuntary hospitalizations (17,21), substance use problems (11,13,17–20,28,30), unemployment and low socioeconomic status (18,30), and homelessness (20,25,26,30).

Police Involvement in Pathways to Mental Health Care

In regard to police involvement in care, the search uncovered 49 studies including 615,360 individuals accessing mental health services (24,32–79) (Table 2). After removal of one study with a relatively large sample (N=552,137) (35), the overall results indicate that 12% of persons with mental disorders (7,563 of 63,223 individuals) had the police involved in their pathway to mental health services.

Most studies (k=43, N=609,327) were from Western countries, predominantly the United States (k=18, N=561,327), the United Kingdom (k=11, N=17,920), and Australia (k=11, N=18,981). Rates reported in the United States

TABLE 1. Police arrests among persons with mental disorders in 22 studies

Study	With disorder and history of arrest	With disorder	Rate of police arrest (%)	99% CI
McCabe et al., 2012 (3)	1,538	13,816	11	10.31–11.69
Christopher et al., 2012 (11)	134	1,044	13	10.32–15.68
Harry and Steadman, 1988 (16)	81	568	14	10.25–17.75
Swartz and Lurigio, 2007 (19)	13,295	73,579	18	17.64–18.36
Cuellar et al., 2007 (13)	1,563	6,624	24	22.65–25.35
Cocozza et al., 1978 (12)	510	1,938	26	23.43–28.57
Fisher et al., 2006 (14)	3,856	13,816	28	27.02–28.98
Fisher et al., 2011 (15)	3,523	10,742	33	31.83–34.17
Holcomb and Ahr, 1988 (17)	232	611	38	32.94–43.06
Muntaner et al., 1998 (18)	442	1,155	38	34.32–41.68
Theriot and Segal, 2005 (20)	303	673	45	40.06–49.94
11 smaller studies[a]	1,122	2,286	49	46.31–51.69
Total	26,599	126,852	21	20.71–21.29
Total, excluding (19)	13,304	53,273	25	24.52–25.48

[a] Bloom et al., 1981 (21); Brekke et al., 2001 (22); Calsyn et al., 2005 (23); Compton et al., 2006 (24); Gelberg et al., 1988 (25); Lamb and Lamb, 1990 (26); Lamb et al., 1995 (31); Link et al., 1992 (27); McFarland et al., 1989 (28); Sosowsky, 1978 (29); White et al., 2006 (30)

(k=18, N=561,329, M=29%) were higher than those reported elsewhere (k=31, N=54,031, M=18%; t=2.37, df=47, p<.05). Most studies (k=29, N=33,640) reported data prior to 2000. Average rates of police involvement were higher in studies with smaller (<500) samples (k=31, N=6,225, M=26%) than those with larger (≥500) samples (k=18, N=609,134, M=15%; t=2.44, df=47, p<.05). Average rates of police involvement were similar for institutional services, such as hospitals and residential care (k=37, N=43,302, M=22%), noninstitutional services (k=3, N=837, M=28%), or combined services (k=6, N=997, M=18%).

The included studies pointed to numerous factors that were associated with higher rates of police involvement in pathways to mental health care, most of which have been studied at the individual level. These factors include male gender (33,41,43,58,70,77), black race (49,65), substance use problems (37,43,45,52,58,69,77), aggressive and violent behavior (37,45,49,67,69,77), psychosis and related symptoms (58,73,77), severe psychiatric impairment (37,49,67), unemployment (43,49), and involuntary service use (35,46,69).

Police Calls for Service Involving People With Mental Disorders

The search uncovered 15 studies that together included 3,624,990 police calls for service and encounters (80–94) (Table 3). After removal of two studies with relatively large samples (N=2,868,889) (89,93), the overall results indicate that 1% of police calls for service (8,459 of 756,101 calls) involved people with mental disorders. Three studies relied on a similar data set with overlapping, but different, time periods. As such, two of the studies (83,84) were removed, and an overall rate was recalculated, confirming that 1% of police calls for service (4,693 of 414,311) involved people with mental disorders.

Proportions of police calls involving people with mental disorders were similar for studies from the United States (k=10, N=2,919,397, M=6%) or Canada (k=5, N=705,593,

M=8%). Most studies (k=9, N=3,582,022) reported data after 2000. Studies with smaller samples tended to have larger rates (r_s=−.86, df=15, p<.001). Average rates were statistically similar between studies that collected data through administrative databases (k=7, N=3,574,482, M=4%), police officer surveys (k=4, N=42,899, M=6%), and researcher field observations (k=4, N=7,609, M=8%). Average rates of mental health–related calls for service were elevated when mental disorders were determined through fieldworker observations (k=3, N=4,368, M=9%) and police officer perceptions (k=6, N=398,237, M=8%) compared with other methods, such as dispatcher coding (k=2, N=2,868,889, M=1%), researcher-generated data algorithms (k=3, N=350,255, M=2%), and combined methods (k=1, N=3,241, M=4%); however, the small number of studies within each method type precluded statistical comparisons. Average rates in studies focused on crime-related incidents only (k=6, N=8,523, M=10%) tended to be larger than rates reported in studies that captured a broader range of interactions between police and citizens (k=9, N=3,616,467, M=3%; t=2.93, df=13, p<.05).

The included studies pointed toward some contextual variables that were associated with rates of police calls for service involving people with mental disorders. Two studies indicated that neighborhood characteristics, such as a high concentration of mental health and social services, a low proportion of black citizens, and a high proportion of renters, were associated with an increase of mental health–related calls to police (89,94). Another study indicated that increased rates are associated with characteristics of local police services, such as the implementation of a crisis intervention team program (93).

DISCUSSION

This review synthesized rates reported in 85 unique studies of contact between police and people with mental disorders. The estimates varied considerably depending on the type of rate. Overall, the findings suggest that typically one in four people with mental disorders have histories of police arrest, which is substantially higher than estimated rates among general adult populations in Canada (95) and the United Kingdom (96) but in line with rates in the United States (97,98). This review also found that about one in ten individuals encountered police in their pathway to mental health care, and one in 100 police dispatches and encounters

involve people with mental disorders. Such results shed empirical light on claims made by journalists, politicians, police personnel, and scholars about the frequency with which the police and people with mental disorders interact.

As is the case with most reviews of this nature, the included studies reported a wide range of rates, varying across the populations studied and the methods employed. This body of research predominantly consists of samples drawn from the United States, with some indication that U.S. police officers, compared with those in other countries, may play a greater role in connecting people to mental health services. When viewed optimistically, this might suggest that U.S. police officers are more actively involved, compared with their counterparts in other countries, in facilitating precharge diversion processes aimed at preventing people with men-

TABLE 2. Police involvement in care pathway among persons with mental disorders in 49 studies

Study	With disorders		Rate of police involvement (%)	99% CI
	Police involvement in mental health care pathway	Sought or accessed mental health care		
Evans and Boothroyd, 2002 (37)	53	1,779	3	1.96–4.04
Lim, 1983 (44)	46	1,280	4	2.59–5.41
Malla et al., 1987 (46)	231	5,729	4	3.33–4.67
Hitch and Clegg, 1980 (40)	46	1,131	4	2.50–5.50
Meadows et al., 1994 (47)	306	6,127	5	4.28–5.72
Hatfield, 2008 (39)	810	14,514	6	5.49–6.51
Kimhi et al., 1996 (41)	144	1,861	8	6.38–9.62
Bruffaerts et al., 2006 (33)	306	3,708	8	6.85–9.15
Bruffaerts et al., 2004 (32)	93	1,050	8	5.84–10.16
Kneebone et al., 1995 (42)	634	6,967	9	8.12–9.88
Brunero et al., 2007 (34)	130	869	15	11.88–18.12
Fry and Brunero, 2004 (38)	194	1,076	18	14.98–21.02
Durham et al., 1984 (36)	650	3,570	18	16.34–19.66
Maharaj et al., 2011 (45)	269	1,462	18	15.41–20.59
Lee et al., 2008 (43)	460	2,334	20	17.87–22.13
Watson et al., 1993 (49)	186	763	24	20.02–27.98
Christy et al., 2010 (35)	248,639	552,137	45	44.83–45.17
Wang et al., 2015 (48)	1,433	2,777	52	49.56–54.44
31 smaller studies[a]	1,572	6,225	25	23.59–26.41
Total	256,202	615,360	42	41.84–42.16
Total, excluding (35)	7,563	63,223	12	11.67–12.33

[a] Archie et al., 2010 (50); Bhugra et al., 1999 (51); Broussard et al., 2010 (52); Burnett et al., 1999 (53); Burns et al., 2011 (54); Chong et al., 2005 (55); Cole et al., 1995 (56); Commander et al., 1999 (57); Compton et al., 2006 (24); Dhossche and Ghani., 1998 (58); Friedman et al., 1981 (59); Garety and Rigg, 2001 (60); Gater and Goldberg, 1991 (61); Gater et al., 2005 (62); Gillig et al., 1990 (63); Kiliç et al., 1994 (64); Lawlor et al., 2012 (65); Lund et al., 2010 (66); McNiel et al., 1991 (67); Moodley and Perkins, 1991 (68); Reinish and Ciccone, 1995 (69); Sales, 1991 (70); Sim et al., 1990 (71); Steadman et al., 1986 (72); Steel et al., 2006 (73); Swanson et al., 2008 (79); Temmingh and Oosthuizen, 2008 (74); Thienhaus et al., 1995 (75); Way et al., 1992 (76); Way et al., 1993 (77); Zohar et al., 1987 (78)

tal disorders from further involvement with the criminal justice system. Conversely, this finding may also signal serious problems associated with the criminalization of people with mental disorders in the United States, whereby criminal justice processes, agents, and institutions are used to manage mental health issues. Another source of variation in rates was the diverse methods used for establishing the presence of an arrest history and a mental disorder, such as self-report versus official records, although these findings were mixed across the three types of rates examined in this review. Methodological quality of the studies was not formally appraised and controlled in this review, but the rates varied across different methodological characteristics, such as the size of the samples and the various ways in which mental disorder was operationalized.

One problem that has plagued research in this area is how to establish valid and reliable indicators of mental disorder in the context of police contacts. Scholars have developed rigorous field observation methods to reduce biases inherent in police-generated data (90,94). A limitation of this approach is that it is resource-intensive and difficult to perform on a large scale. Sophisticated data algorithms also have been produced to identify persons with mental disorders within administrative police databases (80,81,83,84). Although this method can be carried out on large data sets

and is relatively easy to replicate, it is dependent on the reporting practices of dispatchers and police officers and, as such, likely underestimates the number of encounters that actually involve people with mental disorders. Triangulating data and methods, as was done in this review, enhances the validity of such rates, but the underreporting of mental disorders remains an issue. A number of factors influence whether mental disorders will be discovered by, or reported to, the police, including relevance to the encounter, concealability, the skills of police personnel, and the fact that people who more often interact with the police, such as men and persons from racial-ethnic minority groups, may be the least motivated to disclose mental health issues (99). It would be prudent for researchers and decision makers to be mindful of these methodological issues when comparing the rates of different jurisdictions and when drawing conclusions about the nature and magnitude of the phenomenon.

Rates of contact between the police and people with mental illness tell us more about the patterned social arrangements in society than the criminality of individuals with mental disorders. Numerous studies expose the powerful social forces and diverse situations that bring these two groups together. Police interactions involving people with mental illnesses are often casual in nature, unrelated to offending behavior, and resolved through informal means

TABLE 3. Police calls for service involving people with mental disorders in 15 studies

| Study | Police calls for service | | Rate of calls involving mental disorders (%) | 99% CI |
	Involving people with mental disorders	All calls		
Crocker et al., 2009 (81)	1,491	354,981	0	.37–.43
Teller et al., 2006 (93)	10,004	1,527,281	1	.98–1.02
Hartford et al., 2005 (83)	2,949	229,858	1	.95–1.05
Hoch et al., 2009 (84)	817	111,912	1	.92–1.08
Kessell et al., 2009 (89)	28,197	1,341,608	2	1.97–2.03
Kaminski et al., 2004 (88)	49	2,060	2	1.21–2.79
Charette et al., 2011 (80)	272	8,485	3	2.52–3.48
Engel and Silver, 2001 (82)	103	3,241	3	2.23–3.77
Teplin, 1985 (94)	85	2,122	4	2.90–5.10
Panzarella and Alicea, 1997 (91)	1,879	35,000	5	4.70–5.30
Ruiz and Miller, 2004 (92)	376	5,220	7	6.09–7.91
Novak and Engel, 2005 (90)	49	617	8	5.19–10.81
Johnson, 2011 (86)	62	619	10	6.89–13.11
Kalinich and Senese, 1987 (87)	256	1,629	16	13.66–18.34
1 smaller study[a]	71	357	20	14.55–25.45
Total	46,660	3,624,990	1	.99–1.01
Total, excluding (89,93)	8,459	756,101	1	.97–1.03
Total, excluding (83,84,89,93)	4,693	414,331	1	.96–1.04

[a] Holley and Arboleda-Florez, 1988 (85)

(80,93,100). The criminalization of illicit substances, the coercive underpinnings of mental health policies and services, and the intersecting functions of our mental health and criminal justice institutions are all implicated in these trends (101,102). Consistent with other reviews (103), this study revealed that rates of contact between police and people with mental disorders were correlated with a number of individual, organizational, and contextual factors, including homelessness, substance use problems, gender and race, and social disorganization. In addition to methodological differences, these characteristics are likely major sources of variation in rates between studies and jurisdictions. Interestingly, one study indicated that building the capacity for police services to respond appropriately to people with mental disorders, such as through training or specialized response teams, may increase the rate of mental health–related calls for services; however, the drivers of such changes (reporting practices versus greater reliance on police services) are not well understood and warrant greater research attention. What is clear is that reducing the rates revealed in this study will require that improvements be made to the undesirable social context in which people with mental disorders find themselves: terrible situations requiring routine and recurrent intervention by the police.

A number of methodological limitations must be noted. First, it is likely that a sizeable number of studies reporting on arrest histories among people with mental disorders were not captured by the literature search because they focused on other substantive issues and their titles, abstracts, or keywords did not contain necessary terms (that is, police* OR law enforce*). Second, the literature search was first performed in 2009 and then replicated in 2015; consequently, it was not possible to determine and report on the total number of studies screened and assessed for eligibility. Third,

methodological quality of the included studies was not formally appraised, and variability in quality was not controlled. Fourth, an initial search of the gray literature revealed few unpublished documents reporting primary data and satisfying other inclusion criteria. As such, the review was restricted to published research, which may pose a threat to the validity of the findings on account of publication bias.

The gross estimates of rates presented in this study will be of interest to researchers and police personnel who focus their efforts on understanding and improving such interactions; however, the study did not engage with a number of central questions. For instance, are these interactions increasing in frequency? Is the nature of these encounters changing? Are repeated contacts becoming more common? In what ways do interactions with police differ for people with or without mental disorders? How are rates affected by the implementation of specific strategies, including police training and specialized response models, aimed at improving encounters between police officers and people with mental disorders? What role does the presence of a mental disorder, as opposed to other factors, actually play in these interactions? Such questions have important implications for policy makers, police leadership, and health care planners and are worthy of additional research.

CONCLUSIONS

Numerous coroner inquests and public inquiries after tragic events have created a heightened awareness of issues surrounding police encounters with people who have mental disorders. A prevailing sentiment is that many of these interactions are undesirable, unnecessary, and avoidable. By providing estimates regarding the rates of contact between police and people with mental disorders, this study illuminates the magnitude of the issue and supplies an empirically supported reference point to scholars and practitioners in this area.

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