Emergency psychiatry, compulsory admissions and clinical presentation among immigrants to The Netherlands

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Background Black individuals in the UK have higher rates of contact with psychiatric emergency services than their White counterparts. It is unknown whether this is also the case in other European countries.

Aims To compare the risk of contact with psychiatric emergency services and of compulsory admission between immigrant groups to The Netherlands and Dutch natives, and to determine the unique contribution of ethnicity to compulsory admission.

Method Study of 720 people referred to emergency psychiatric services in Greater Rotterdam, The Netherlands.

Results The relative risks (RRs) for contacts with psychiatric emergency services, for having a psychotic disorder and for compulsory admission were significantly higher in most immigrant groups. Moroccans, Surinamese and Dutch Antilleans had the highest risks of compulsory admission. After controlling for symptom severity, danger, motivation for treatment and level of social functioning, non-Western origin was no longer associated with compulsory admission.

Conclusions Non-Western immigrant groups were overrepresented in psychiatric emergency care and were admitted compulsorily more frequently, possibly owing to a different clinical presentation.

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Black individuals in the UK come into contact with psychiatric emergency services more frequently than do White individuals and are more often admitted compulsorily (Davies *et al*, 1996; Bhui *et al*, 2003). It is not known whether this situation is specific to the UK or also occurs in other European countries (Bhui *et al*, 2003). Moreover, the reasons for these differences are poorly understood. It is suggested that differences in patient characteristics, such as clinical presentation and poor insight, are associated with the increased risk of compulsory admission (Morgan *et al*, 2004). We conducted a prospective study of contacts with psychiatric emergency services, investigating whether immigrant groups had a higher risk than Dutch natives of coming into contact with such services, of being diagnosed as having a psychotic disorder and of being compulsorily admitted. We also investigated whether compulsory admission was associated with migrant status or with clinical characteristics, including severity of symptoms, motivation for treatment or greater (perceived) danger to others.

METHOD

Setting

The study was conducted in the Greater Rotterdam region (1.2 million inhabitants). Individuals are referred to the mobile psychiatric emergency services by general practitioners or mental health workers. The staff of the emergency services consists of a total of 109 community psychiatric nurses, physicians and psychiatrists. Thirty-three of these staff members participated in the study (30%), of whom 26 (78%) were men, compared with 14 (42%) in the group of clinicians who did not participate in the study ($\chi^2=13.27$; $P<0.01$). There was no significant difference between participating and non-participating clinicians with respect to the percentage of physicians, psychiatrists or nurses. Together, the participants completed 30% of day and night shifts, including weekends, and filled out patient record forms for all their assessments in 2001. The study was approved by the local medical ethics committee.

Patients

Patients (aged 18–65 years) were examined where they were at the time of referral, e.g. at their home, at a police station or at a community mental health centre. In The Netherlands the police are not allowed to take psychiatrically disturbed individuals to a psychiatric hospital and usually request an assessment by the emergency service staff at the police station. After the examination of the patient, the clinician decides whether admission (voluntary or compulsory) to a psychiatric hospital is necessary. In The Netherlands compulsory admission is officially ordered by the local authority (mayor) upon advice from a physician, usually a psychiatrist. The criterion for compulsory admission is danger to self or others, not the need for treatment.

Variables

Information was collected on age, gender and country of birth of the patients and their parents. Clinical characteristics included admissions (yes or no) during the previous 2 years, severity of problems as assessed by the Severity of Psychiatric Illness scale (SPI; Lyons, 1998) and the Global Assessment of Functioning (GAF; Endicott *et al*, 1976). The SPI is an observer-rated decision support tool to assess the need for services, especially in-patient care. We assessed

(a) severity of symptoms and substance misuse;

(b) behavioural problems (suicide risk, danger to others and difficulty with self-care);

(c) insight and motivation (awareness of illness, motivation for treatment and medication adherance).

The SPI items were scored on a four-point scale from 0 (no problem) to 3 (severe problem). Severity of symptoms included phenomena such as hallucinations, delusions, depression, mania or anxiety. The validity of the SPI has been established (Lyons, 1998) and the interrater reliability of the Dutch translation of the SPI was satisfactory (overall κ=0.76; Mulder *et al*, 2005).

The psychiatric emergency service clinicians had followed an SPI training

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programme as described in the manual (Lyons, 1998), followed by a booster training 2 months later. The diagnoses were grouped into five categories: psychosis, depression, mania, psychosocial problems and 'other'. All consecutive patients seen during the shifts of the participating clinicians were included, thereby preventing selection bias. If the same patient was seen more than once, data from the first assessment were used. Patients of unknown country of origin (*n*=106; 15%) were analysed as a separate group. The socio-economic status of the patient's neighbourhood was determined by using the mean income in that postal code area. Patients with an unknown postal code (*n*=42; 6%) were excluded from relevant analyses. Very few values were missing for other variables (0–5%) and they were not replaced.

Population estimates

Population denominators for Greater Rotterdam, divided by age and gender, were derived from the Dutch Central Bureau of Statistics. The Bureau classifies citizens according to country of birth rather than ethnicity, and combines first- and second-generation immigrants. A Dutch-born citizen is considered a second-generation immigrant if at least one parent was born abroad. Natives are Dutch-born citizens whose parents were also born in The Netherlands. The most important immigrant groups are from Morocco, Turkey, Surinam and the Dutch Antilles. First- or second-generation immigrants from other countries can be of Western origin (parents born in western, northern or southern Europe, the USA, Canada, Australia, New Zealand, Japan and Israel) or of non-Western origin. For all individuals residing legally in The Netherlands registration with municipal authorities is compulsory and a prerequisite for essential documents (e.g. residence and work permits) and possible aid (e.g. income support). The Dutch Central Bureau of Statistics figures do not cover an unknown but small proportion of immigrants whose residence is illegal (less than 10%). Therefore, we did not correct for the number of illegal immigrants. Importantly, a large group of immigrants to The Netherlands, people from the Dutch Antilles, have no reason not to register since they are Dutch citizens.

We compared the distribution of immigrant groups within the sample of emergency psychiatric patients with the distribution of the same immigrant groups within the population.

Analysis

We did not distinguish between first- and second-generation immigrants, and defined eight groups: Dutch natives, Moroccans, Turks, Surinamese, Dutch Antilleans, immigrants from other Western countries, those from other non-Western countries and those of unknown origin. Gender- and age-adjusted relative risks (RRs) for psychiatric emergency contacts, for having a psychotic disorder, and compulsory admission were calculated by Poisson regression analyses, using Egret (Cytel Software, 1999, http://www.cytel.com/products/egret).

Immigrant status as a risk factor for compulsory admission was assessed using three logistic regression analyses, combining non-Western immigrants into one group (Moroccans, Surinamese, Dutch Antilleans and other non-Western immigrants), and assessing first the association between non-Western ethnicity and compulsory admission, without controlling for confounding factors; second, entering demographic factors (age, gender, socio-economic status of neighbourhood) into the model; and third, entering demographic and clinical factors into the model, including previous admissions (yes or no), eight SPI scores, GAF score and a diagnosis of psychosis (yes or no).

RESULTS

Demographic and clinical characteristics

In total 720 patients were examined, 234 (33%) of whom were first- or second-generation immigrants. Native Dutch patients were significantly older than patients from the other groups (Table 1). A total of 346 patients (48%) had a psychotic disorder and 158 (22%) were admitted compulsorily. A diagnosis of psychotic disorder was much more common in immigrant groups (e.g. 34% in Dutch natives *v.* 76% in Moroccans). Gender- and age-adjusted univariate analyses showed no difference in GAF scores, severity of symptoms or substance misuse problems, except for lower rates of substance misuse problems among Surinamese individuals. Scores on the SPI for suicide risk were significantly lower among all ethnic groups than among Dutch natives, with the exception of Turkish individuals. Danger to others was higher among Moroccan individuals. Surinamese and Antillean individuals showed less motivation for treatment and knowledge of illness than Dutch natives did.

Risk of contacts with psychiatric emergency service

Gender- and age-adjusted relative risks for contact with the psychiatric emergency services for any psychiatric disorder were significantly higher in all immigrant groups than in Dutch natives, with the exception of immigrants from Turkey and Western countries (Table 2). The highest risks were found for Dutch Antilleans, Moroccans and individuals from other non-Western countries. The risk of contact for psychotic disorders was significantly higher among immigrants from Morocco, Turkey, Surinam, the Dutch Antilles and other non-Western countries. Finally, the risk of compulsory admission was significantly higher among immigrants from non-Western countries, with the exception of Turkey.

Country of origin as an independent risk factor for compulsory admission

We examined which variables predicted compulsory admission in members of those immigrant groups that had an increased relative risk of compulsory admission (Moroccans, Surinamese, Dutch Antilleans and other non-Western immigrants). Using three models we analysed the association between non-Western ethnicity (these immigrant groups combined *v.* Dutch natives) and compulsory admission: not controlling for confounding factors, controlling for demographic factors, and finally controlling for demographic and clinical factors (Table 3).

Non-Western origin was found to be significantly associated with compulsory admission in the first model only. Male gender was associated with compulsory admission in the second model. Finally, in the third model, severity of symptoms, danger to others, lack of motivation for treatment and low GAF scores were positively associated with compulsory admission. Overall, the percentage of correctly predicted cases in model 3 was 93% (Nagelkerke r^2=0.72). When these analyses were repeated for patients with psychotic disorders (*n*=323, of whom 120 were admitted compulsorily), danger to others

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Table 1 Demographic and clinical characteristics of the sample

	Dutch natives	Immigrants' country of origin							Total sample
		Morocco	Turkey	Surinam	Dutch Antilles	Other Western country	Other non-Western country	Country of origin unknown	
Gender[1]									
Male (n)	205	19	22	28	10	15	30	64	393
Female (n)	175	10	9	23	11	23	34	42	327
Age, years: mean (s.d.)[1]	40 (12)	29 (9)**	30 (10)**	33 (10)**	32 (9)**	33 (10)**	33 (10)**	36 (11)**	37 (11)[2,*]
Previous out-patient contact, %[1]	63	55	58	61	52***	63	52**	58**	60[3,*]
Previous admission, %[1]	34	31	16	39	48	16	33	45	34[3,*]
Psychotic disorder, %[1]	34	76**	58**	71**	67**	42	64**	62**	48[3,*]
SPI item scores: mean[1,4]									
Severity of symptoms	2.01	2.03	1.90	2.10	2.38	1.97	2.06	2.10	2.04
Substance misuse	0.88	0.88	0.79	0.54*	1.18	0.68	0.86	1.14	0.88
Suicide risk	1.39	0.61**	1.35	0.90**	1.05*	0.92*	0.74**	0.97**	1.17[2,*]
Danger to others	0.75	1.31*	1.26	1.06	1.10	0.50	0.94	1.17*	0.89[2,*]
Difficulty with self-care	1.00	1.04	0.90	1.20	1.62**	0.79	1.05	1.33**	1.07[2,*]
Awareness of illness problems	1.72	2.04	1.94	2.00*	2.50**	1.49	2.10**	1.92	1.83[2,*]
Lack of motivation for treatment	1.33	1.41	1.42	1.71*	1.90*	1.42	1.59	1.83**	1.48[2,*]
Medication compliance problems	1.08	1.21	0.83	1.41	1.75*	0.97	1.26	1.36*	1.16[2,*]
GAF scores: mean (s.d.)[1]	46 (14)	41 (13)	45 (15)	43 (15)	42 (12)	48 (14)	44 (15)	42 (15)*	45 (14)
Voluntary admission, %[1]	18	24	13	22	19	11	19	18	18
Involuntary admission, %[1]	17	21	23	29*	33	16	16	36*	22[3,*]

GAF, Global Assessment of Functioning; SPI, Severity of Psychiatric Illness.
1. Analysis of variance (ANOVA) adjusted for gender and age, or χ^2, immigrant group *v.* Dutch natives.
2. ANOVA, adjusted for gender and age.
3. Chi-squared overall.
4. Higher score means more problems on the SPI item.
*$P < 0.05$; **$P < 0.01$.

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Table 2 Gender- and age-adjusted relative risks for any contact with the psychiatric emergency services, for contact for a psychotic disorder and for contact followed by compulsory admission

Section of population	Person-years at risk[1]	All contacts		Contacts for psychotic disorder		Contact followed by compulsory admission	
		Cases	RR (95% CI)	Cases	RR (95% CI)	Cases	RR (95% CI)
Dutch natives	582 334	380	1.0	129	1.0	66	1.0
Moroccans	20 715	29	2.0 (1.4–2.9)	22	4.2 (2.7–6.7)	6	2.2 (1.0–5.2)
Turks	34 243	31	1.3 (0.9–1.8)	18	2.0 (1.2–3.3)	7	1.4 (0.6–3.2)
Surinamese	41 953	51	1.7 (1.3–2.3)	36	3.5 (2.4–5.1)	15	3.0 (1.7–5.2)
Antilleans	15 581	21	1.9 (1.2–3.0)	14	3.7 (2.1–6.4)	7	3.6 (1.6–7.9)
Other Western	77 809	38	0.7 (0.5–1.0)	16	0.9 (0.5–1.6)	6	0.7 (0.3–1.6)
Other non-Western	42 357	64	2.2 (1.7–2.8)	41	3.9 (2.8–5.6)	10	1.9 (1.0–3.6)
Total	814 992	614[2]		276		117	

1. Number of persons who lived in the region of interest during the year 2001 (observation period).
2. Total number of patients is 614 and not 720 because country of origin was unknown for 106 patients.

Table 3 Association between country of origin of patient or parents (non-Western countries, including Morocco, Dutch Antilles and Surinam, or other non-Western countries, with the exception of Turkey, *v.* The Netherlands) and compulsory admission. Effects are presented as odds ratios from the three separate logistic regression analyses: model 1, not controlling for other factors; model 2, controlling for demographic factors; model 3, controlling for demographic and clinical factors

	Adjusted odds ratio (95% CI)	*P*
Model 1		
Country of origin[1]	1.60 (1.00–2.53)	<0.05
Model 2		
Country of origin[1]	1.54 (0.93–2.55)	<0.10
Gender[2]	0.47 (0.29–0.75)	<0.001
Age	0.99 (0.97–1.01)	0.20
Socio-economic status	1.00 (0.99–1.01)	0.65
Model 3		
Country of origin[1]	0.63 (0.21–1.85)	0.50
Gender	1.13 (0.41–3.09)	0.82
Age	0.98 (0.94–1.02)	0.35
Socio-economic status	1.00 (0.99–1.01)	0.60
Previous admissions	0.98 (0.40–2.44)	0.97
Suicide risk	1.25 (0.82–1.89)	0.30
Severity of symptoms	2.67 (1.74–4.10)	<0.001
Danger to others	3.40 (1.53–7.53)	<0.005
Problems with self-care	0.65 (0.37–1.13)	0.15
Substance misuse	0.93 (0.59–1.48)	0.75
Lack of treatment motivation	6.51 (3.14–13.51)	<0.001
Medication adherance problems	1.01 (0.67–1.78)	0.70
Lack of awareness of illness	1.25 (0.56–2.81)	0.60
GAF score	0.94 (0.90–0.98)	<0.010
Psychotic disorder	1.65 (0.51–5.28)	0.40

GAF, Global Assessment of Functioning.
1. Higher odds ratio means increased risk for non-Western immigrants.
2. Lower odds ratio means increased risk for men.

(odds ratio 4.1, 95% CI 2.22–7.67), motivation for treatment (OR=11.34, 95% CI 3.49–36.89) and low GAF score (OR=0.95, 95% CI 0.89–0.99) were significantly associated with compulsory admission, not severity of symptoms or migrant status. Overall, the percentage of correctly predicted cases was 88% (Nagelkerke r^2=0.77).

DISCUSSION

We found first- and second-generation immigrants from non-Western countries to be at a higher risk of contact with psychiatric emergency services than members of the native Dutch population. They also had a 2–4 times higher risk of contact for a psychotic disorder, and a 1.4–3.6 times higher risk of contact followed by compulsory admission. The immigrants from non-Western countries also included non-Black groups, for example Turks. The association between non-Western ethnicity and compulsory admission was found to be explained by a greater severity of psychiatric symptoms, greater level of threat, more lack of treatment motivation and lower level of functioning.

Risk of contact with services

The higher risk of contact with psychiatric emergency services for non-Western immigrants is in line with previous findings in the UK (Bhui *et al*, 2003). The higher risk was largely due to a higher risk of psychotic disorders among these groups, which is consistent with the findings of epidemiological studies in Belgium and The Netherlands (Selten *et al*, 1997, 2001; Fossion *et al*, 2002). It is also possible that some immigrants do not follow the usual pathway to psychiatric care and seek help at a later stage (Morgan *et al*, 2004). Indeed, Dutch

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Antilleans and patients from 'other non-Western countries' had fewer previous out-patient contacts than Dutch natives, but this was not true for immigrants from Turkey, Morocco or Surinam (see Table 1).

Compulsory admission and clinical presentation

When considering possible explanations for the higher risk of compulsory admission among immigrants from non-Western countries, it may be useful to distinguish between symptoms (e.g. hearing voices) and clinical presentation (e.g. aggression, as a response to hearing voices, or lack of motivation for treatment) (Morgan *et al*, 2004). The staff of the emergency psychiatric services evaluated these immigrant groups as more dangerous and less motivated to receive treatment than Dutch natives (see Table 1). If these assessments were valid, the immigrants presented their symptoms, verbally or non-verbally, in a different way, which was sometimes characterised by higher levels of aggression or less motivation for treatment. This may explain why, in the multivariate analyses, severity of symptoms, greater level of threat, lack of treatment motivation and lower level of functioning were associated with involuntary admission, and not migrant status or having a psychotic disorder. It might be that such differences in clinical presentation between natives and immigrants from non-Western countries are associated with the clinician's decision to admit these patients under compulsion.

Ethnic bias

Another explanation for the higher rates of compulsory admission among immigrants is that the clinicians – approximately 90% of whom were Dutch – were ethnically biased. Evidence for such bias has been reported by Lewis *et al* (1990): although British psychiatrists did not more readily detain patients compulsorily merely on the grounds of 'race', Black patients were judged as potentially more violent than White patients. As stated above, in our study, unfamiliarity with the way these immigrants present symptoms might have led to misinterpretation and to a greater perceived threat and more symptoms. Although danger to others and other clinical variables were measured using a structured assessment tool (SPI), this does not guarantee that these assessments were free from observation bias. Furthermore, it is important to note that the clinicians who decided upon compulsory admission also filled out the SPI. In future studies therefore, it would be preferable to use independent raters, separating those who decide on (in)voluntary admission from those who assess patient characteristics using an instrument such as the SPI. To our knowledge, however, this is the first study of its kind to examine the unique contribution of migrant status to compulsory admission, controlling for clinical and behavioural characteristics. Interestingly, in the multivariate analyses, lack of awareness of illness was not associated with compulsory admission, indicating that this variable may be less important in the involuntary admission process than poor motivation for treatment.

Involuntary admission for psychotic disorder

When we repeated the analyses for patients with psychotic disorders only, we found that danger to others, lack of motivation for treatment and GAF score, not ethnicity or severity of symptoms, were significant predictors of compulsory admission. This is the most important group in terms of emergency admissions and for comparison with other studies (Bhui *et al*, 2003). It may be that in the subgroup of patients with psychotic disorders we did not find an association with ethnicity and severity of symptoms owing to lack of power. Another possibility is that in this group of patients, as compared with patients with other Axis I diagnoses, dangerous behaviour was relatively more important than severity of psychotic symptoms for compulsory admission.

Limitations of the study

Only 30% of the clinicians working in the psychiatric emergency services volunteered to participate in the study. The other clinicians did not participate for various reasons, for example lack of time or reluctance to work with a structured assessment tool. The majority of the participating clinicians were men. However, one can only speculate about whether this could lead to an information bias. In most other studies, the gender of the clinician who gathers information is not taken into account. Since the participating clinicians filled out record forms for all consecutive patients, and in view of the random nature of their work roster, we have no reason to think that this situation led to information bias.

The psychiatric diagnosis was based on a clinical interview, not on a standardised diagnostic interview. The latter is difficult to apply in an emergency situation, given the limited amount of time and the pressure on the clinicians, whose primary tasks are triage, containment and referral (Mulder *et al*, 2005). Usually, the diagnosis of a psychotic disorder was based on the presence of delusions and/or hallucinations. Socio-economic status was based on the mean income levels of postal code areas, not on the socio-economic status of individual participants. Another limitation of the study is the small number of patients in some of the immigrant groups, thereby lowering the statistical power of the study, and possibly causing negative findings in the analyses. Finally, other factors that could explain the increased rates of involuntary admissions among non-Western immigrants, such as the quality of their social networks or their beliefs about mental illness, were not taken into account (Morgan *et al*, 2004).

Implications for future studies

The results of this study may reflect differences in clinical presentation between non-Western immigrants and Dutch natives, and/or ethnic bias on the part of staff. The results may imply that clinicians should be aware of the possibility that they consider patients from non-Western immigrant groups as more dangerous and less motivated. Given the limitations mentioned above, however, the results need to be interpreted cautiously and confirmed by subsequent studies. These studies should focus on understanding the possible differences in clinical presentation between Western and non-Western emergency psychiatric patients. In addition, it is important to investigate whether the raised risk of compulsory admission among non-Western immigrants is caused by their having more mental health or behavioural problems, or by Western clinicians misinterpreting a seemingly more severe clinical presentation. Longitudinal studies are needed following emergency psychiatric contacts and compulsory admissions, to assess differences in the course and presentation of psychiatric illness between Western and non-Western emergency psychiatric patients. Finally, future studies should take into account the effects of social network, cultural context

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and beliefs about mental illness on the risk of contact with psychiatric emergency services and compulsory admission.

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CLINICAL IMPLICATIONS

- All non-Western immigrants to The Netherlands are more likely to come into contact with psychiatric emergency services, especially for psychotic disorders, and are more likely to be admitted compulsorily.
- The association between non-Western country of origin and higher risk of compulsory admission was no longer statistically significant after adjustment for severity of symptoms, dangerous behaviour, lack of motivation for treatment and lower level of functioning.
- Non-Western emergency psychiatric patients may have a different clinical presentation, causing more frequent compulsory admissions.

LIMITATIONS

- Only 30% of the clinicians working in the psychiatric emergency service volunteered to participate in the study.
- Although danger to others and other clinical variables were measured using a structured assessment tool, the assessments might not have been free from observation bias.
- Other factors that may influence the risk of contact with psychiatric emergency services, such as the quality of social network and beliefs about mental illness, were not taken into account.

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