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Is the mental health profile of immigrants changing? A national-level analysis based on hospital discharges in Italy

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Parole chiave: Psichiatria, migranti, rifugiati, richiedenti asilo, ospedalizzazione

Abstract

Background. *Among asylum seekers and refugees in European countries, several studies have shown a high burden of mental disorders, including post-traumatic stress disorder, anxiety, depression and psychoses. The present study compares hospitalization for mental disorders among migrants arriving from countries typically linked to the refugee phenomenon (putative asylum seekers), migrants arriving from other countries, and natives.*

Methods. *The study is based on hospital discharge data collected at the national level by the Italian Ministry of Health. Age-standardized hospitalization rates for mental health diagnoses are calculated for the three groups during the period 2008-2015. Differences in type of admission (urgent or planned) and length of stay in hospital are also assessed.*

Results. *Temporal trends show a general decrease of hospitalization rates for mental disorders among both immigrants and natives; however, an increase is observed among young male putative asylum seekers (from 30.3 in 2010 to 43.6 per 10,000 in 2015), mainly due to admissions for "other nonorganic psychoses".*

Conclusion. *These findings suggest that in Italy a higher burden of mental disorders might derive from the landing phenomenon, and the increase of hospitalization ascribed to "other nonorganic psychoses" (which is a general and unspecific diagnostic label) might conceal diagnostic difficulties by Italian psychiatrists to recognize atypical pictures associated with traumatic experiences.*

Introduction

Although Italy in the first half of the 20th century has been mainly a country of emigration, migratory dynamics have been changing for many years now, with increasing numbers of immigrants arriving from various countries (both European and non-European) mainly for economic reasons. By 31 December 2015, the number of foreign citizens present in Italy was estimated at about 5,498,000, of whom 5,026,153 were regularly resident (about 8% of the Italian population) (1).

In recent years a new phenomenon has emerged: the arrival of increasing numbers of asylum seekers. The number has increased considerably since December 2010, following

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the wave of revolutions in North Africa and the Middle East, the so-called Arab Springs, and the subsequent war in Libya.

Accordingly, a major migratory route to Italy has been across the Mediterranean Sea, from war-torn Libya, on overcrowded boats and small rubber dinghies. The number of arrivals by sea increased from 36,951 in 2008 (2) to 153,842 in 2015 (3) (+316%), alongside an increase of applications for the recognition of refugee status: from 30,324 in 2008 (4) to 83,970 in 2015 (3) (+177%). They mainly came from Sub-Saharan Africa and the Middle East, and were prevalently young males (3).

Among asylum seekers and refugees, European studies have shown a high burden of mental disorders, including post-traumatic stress disorder (PTSD), anxiety, depression and psychoses (5). In particular, a literature review found an increased risk of psychotic disorders in refugees (more pronounced in males) compared with both the indigenous population and non-refugee migrants (6). In Italy there is evidence of an increased prevalence of psychoses among migrants in general (7), while to our knowledge no data exist on selected populations of refugees and asylum seekers. Among recently-arrived asylum seekers landing in Sicily during 2014-2015 and selected on the basis of their willingness to enter a psychological support program, the high burden of mental health diagnoses was mainly due to PTSD (31%) and depression (20%) (8). Another study conducted in a Sicilian reception center, based on asylum seekers' medical records, found that PTSD was the most frequent disorder (17.4%), followed by major depression (7.3%) (9).

Hospitalization rates are more complex indicators than incidence or prevalence. Indeed, they depend not only on the frequency of pathological conditions in the studied population, since care pathways and barriers to access to outpatient services are also relevant. Nevertheless, they are important proxies when prevalence population studies are lacking, hence hospital admissions are often used to describe the level of ill-health and disease in immigrant populations (10). A previous study of hospital admission rates was carried out in France and focused on psychosis among first generation migrants (11). An incidence of first admission rates for psychosis in sub-Saharan Africans, but not in migrants from other European countries or North Africa, was found to be three times higher than in natives. This may suggest specificities in some populations of migrants considered to be more exposed to social risk factors than others. However, since the study was performed in one hospital related to a single catchment area (the 20th district of Paris), the generalizability of these findings is restricted. In Italy, an early study on hospital discharges in the Lazio region reported a higher percentage of psychiatric diagnoses among immigrant males than in natives, while immigrant females (but only those without a permit to stay in Italy) had lower percentages compared to both immigrant women legally residing in Italy and natives (10). More recently, a study focusing on hospitalization rates for psychiatric disorders in Italy in the period 2008-2015 found a significant increase among immigrant males, starting from 2012 (12). This finding was tentatively interpreted as the result of the dramatic increase of refugees arriving in Italy following the Libyan crisis in 2011. However, hospitalization rates of immigrants were not compared with those of the native population, and a distinction between refugees and other immigrants was not considered, so further research is needed for a better understanding of this phenomenon.

The present study is aimed to assess hospitalization for mental disorders among migrants arriving from countries typically linked to the refugee phenomenon, compared to migrants coming from countries characterized by economic migration, and natives.

Methods

We used hospital discharge data (HDD) collected at the national level by the Italian Ministry of Health. The HDD provides information on every discharged patient (including deceased) admitted in public and private hospitals across the country. The study relates to the years 2008-2015.

The criterion for identifying immigrants is based on citizenship information.

In-patient discharges (with overnight stay in hospital) for psychiatric patients were selected on the basis of the principal diagnosis referred to the Chapter V "Mental disorders" of the International Classification of Diseases, IX Revision, Clinical Modification (codes 290-319 of ICD9-CM version 2007).

We considered Italians and immigrants from High Migration Pressure Countries (HMPC), which include the countries of central and eastern Europe (including those belonging to the European Union) and Malta, the countries of Africa, Asia (excluding South Korea, Israel and Japan), Central and Southern America, and Oceania (with the exception of Australia and New Zealand) (13).

Within the immigrant group, we identified two subsets: "Putative Asylum Seekers" (PAS) and "Other Immigrants" (OI). The category PAS refers to citizens from those countries which in recent years have been more frequently associated with asylum requests in Italy (Afghanistan, Bangladesh, Syria, Ivory Coast, Egypt, the Gambia, Guinea, Mali, Morocco, Nigeria, Senegal, Somalia, Sudan, Tunisia, and Eritrea) (14). The OI group includes citizens from remaining HMPC, characterized by lower rates of asylum requests.

The study compares the trend of hospitalization for "mental disorders" among PAS, compared to OI and Italians, in the period 2008-2015.

We calculated age-standardized rates of hospitalization only for residents to guarantee consistency with the denominators available only for the resident population. Estimates of the population, used as denominators to calculate crude and standardized hospitalization rates with the desired level of detail, were calculated from official survey data provided by the National Institute of Statistics (15). Standardization was carried out by applying the direct method and using the resident population in Italy at the date of the 2011 Census as the standard population.

The comparison of the trends was conducted distinctly by gender both for people aged 18 or more (overall) and young people belonging to the age class 18-34. This age group is prevalent among immigrants and particularly among PAS. For the latter, the percentage of 18-34 years olds varies between 43% and 50% in the period of observation, compared to percentages between 20% and 24% among Italians. We know that young people, prevalently males, are more involved in the recent phenomenon of landing from Lybia (3). For this reason, within the age class 18-34 a more detailed analysis was conducted among men, intended to compare the three citizen groups according to further characteristics of the hospital stays, such as specific diagnosis, type of admission (urgent or planned), and length of hospitalization. Statistical significance of differences in rates and proportions was assessed using Chi-squared test or z score when appropriate.

Results

Figure 1 shows that standardized hospitalization rates for mental disorders are generally higher among Italians than among immigrants coming from HMPC. They decreased in the years 2008-2015 among Italians (from 40.2 to 34.3 per 10,000 in males, and from 39.0 to 31.5 per 10,000

in females), as well as among OI (from 22.4 to 16.2 per 10,000 in males, and from 24.3 to 16.9 per 10,000 in females). Among PAS the overall rates also decreased, though in a less evident manner (from 23.3 to 20.8 per 10,000 in males, and from 23.9 to 19.8 per 10,000 in females); diversely, for male PAS aged 18-34 years the temporal trend was inverted and rates increased since 2010, from 30.3 to 43.6 per 10,000 in 2015, with peaks in 2012 and 2014 of 46.9 and 45.0 per 10,000 respectively. These figures are significantly higher than the rates of Italians ($p<0.001$) and almost double the rates of OI ($p<0.001$).

Table 1 shows the 2015 distribution of hospital discharges and hospitalization rates for major diagnostic groups, and 2008-2015 differences in rates, among males aged 18-34 years. While in Italians and OI the most frequent diagnosis is schizophrenia (23.1% in both groups), among PAS the most represented group is "other nonorganic psychoses" (24.8%). Similarly, the diagnosis with the highest rate is schizophrenia among Italians and OI (respectively 7.8 and 5.6 per 10,000), and "other nonorganic psychoses" among PAS (10.1 per 10,000). Personality disorders are also frequent, being the third diagnosis in both groups of immigrants, and the fourth diagnosis in Italians: 13% (5.1 per 10,000), 12% (2.9 per 10,000), and 14% (4.8 per 10,000), respectively.

With regard to differences in rates, among PAS a relevant increase is found from 2008 to 2015 in "other nonorganic psychoses" (+5.5 per 10,000; $p<0.001$), and in personality disorders (+2.6 per 10,000; $p<0.001$). In the same period, among Italians a relevant decrease in rates is observed for schizophrenia (-3.0 per 10,000; $p<0.001$), while among OI the variations are not relevant.

Regarding the type of hospital admission (Table 2), a higher percentage of planned admissions is observed in 2015 among Italians (21.6%) compared to OI (10.3%) and PAS (6.8%). Conversely, emergency

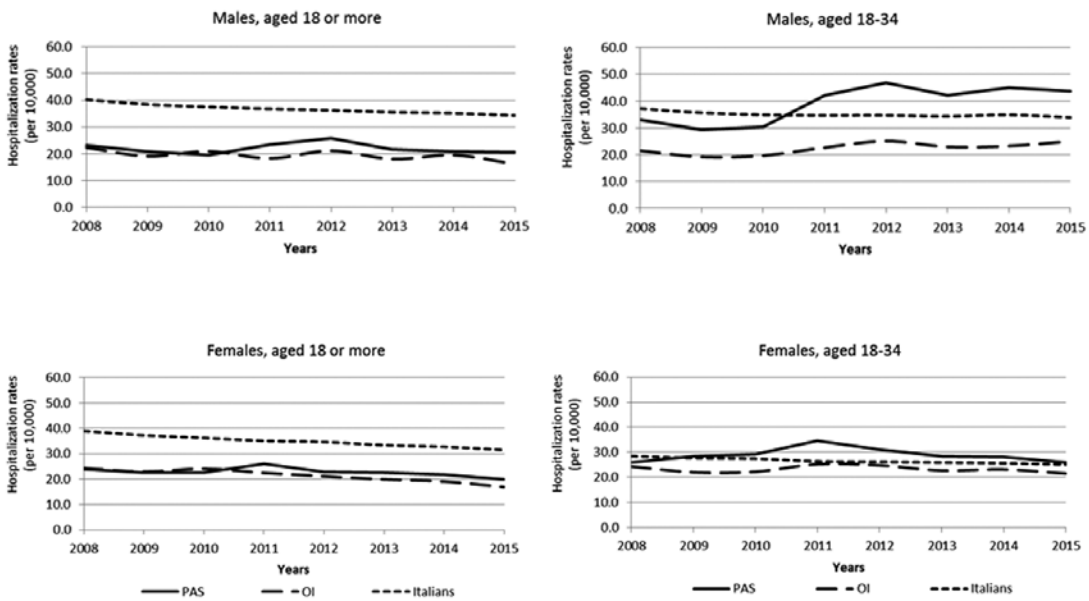

Figure 1 - Age-standardized hospitalization rates for mental disorders, by gender and age (18 or more and 18-34 years old). Putative Asylum Seekers (PAS), Other Immigrants (OI) and Italians, years 2008-2015.

Table 1 - Age-standardized hospitalization rates for mental disorders in 2015 and 2008-2015. Rate differences by diagnostic group among males aged 18-34 years.

ICD9 CM codes	Diagnostic groups	PAS (N=806)			OI (N=1,279)			Italians (N=16,391)		
		%	rate (x10,000)	2008-'15 rate difference	%	rate (x10,000)	2008-'15 rate difference	%	rate (x10,000)	2008-'15 rate difference
290-294	Organic psychoses	5.3	2.2	0.2	5.2	1.2	-0.3	3.9	1.3	0.1
295	Schizophrenia	18.4	7.5	-0.6	23.1	5.6	1.1	23.1	7.8	-3.0
296	Mood disorders	9.7	3.9	1.2	12.6	3.0	1.0	16.1	5.4	0.4
297	Delusional disorders	5.3	2.2	1.6	3.7	0.9	0.6	2.4	0.8	0.1
298	Other nonorganic psychoses	24.8	10.1	5.5	19.6	4.7	1.4	15.3	5.1	1.5
300	Neuroses	2.4	1.0	-0.9	2.8	0.7	-0.7	4.1	1.4	-1.1
301	Personality disorders	12.7	5.1	2.6	12.0	2.9	0.5	14.4	4.8	-0.5
303-305	Dependences	9.1	3.7	-0.7	10.7	2.6	-1.3	9.5	3.2	-1.4
299, 310, 313-315, 317-319	Intellectual disabilities and other neuro-psychological and developmental disorders	2.0	0.8	0.5	3.1	0.8	0.3	4.5	1.5	0.2
302, 306-309, 311-312, 316	Other	10.4	4.2	1.2	7.2	1.7	0.1	6.7	2.2	-0.2
Total		100.0			100.0			100.0		

admissions are higher among the two groups of migrants than in Italians (68.3% in the latter group, 78.9% and 79.9% respectively, among OI and PAS). Finally, compulsory treatments are higher among PAS (12.5%), followed by other migrants (10%) and Italians (9.1%). The differences in types of admission are statistically significant between citizen groups ($p<0.005$).

In all groups, the percentage of planned admissions decreases over time, in spite of an increase in emergency admissions and substantial stability for compulsory treatments.

Finally, average length of hospital stay is similar in the three groups (data not shown): in 2015, 8 days among Italians and OI, and 7 days among PAS.

Discussion

The overall age-standardized hospitalization rates for mental disorders in Italy are constantly lower among immigrants compared to natives. This finding is not easily explained, due to the complex dynamics underlying psychiatric hospitalization, which depends both on prevalence of such disorders in the studied population, and different accessibility to services and care pathways. In any case, the so-called "healthy immigrant effect" (16) seems to maintain some validity: immigrants in Italy show hospitalization rates generally lower than the corresponding figures among autochthons, and the psychiatric sector is no exception. However, rates are not uniform in the population of foreign origin. Indeed, young males (aged between 18 and 34) from countries more frequently related to asylum requests (PAS) have higher rates than both natives and other immigrants (OI). Moreover, the data show a temporal trend, as hospitalization rates in this group increase dramatically and overtake native rates from 2011 onwards. A similar trend is also shown

Table 2 – Percentages of types of admission to hospital for mental disorders in 2015 and 2008-2015 variations among males aged 18-34 years.

Types of admission	PAS (N=806)		OI (N=1,279)		Italians (N=16,391)	
	%	2008-'15 variation (percentage points)	%	2008-'15 variation (percentage points)	%	2008-'15 variation (percentage points)
Planned admission	6.8	-6.7	10.3	-3.4	21.6	-7.9
Emergency admission	79.9	5.5	78.9	2.8	68.3	7.8
Compulsory treatment	12.5	1.2	10.0	1.3	9.1	0.3
Other	0.8	0.0	0.8	-0.7	1.0	-0.2
Total	100.0	-	100.0	-	100.0	-

among young females, although this rapid increase is maintained over time only in males. It is our belief that this is because the recent phenomenon of refugees landing in Italy from Libya involves more PAS aged between 18 and 34 rather than older people from the same countries, as well as than OI. Exposure to traumatic experiences with consequent post-traumatic reactions leads to increased vulnerability to the risk of mental distress (8, 17). Moreover, PAS are more likely to be "forced" migrants, compared to "economic" migrants in the OI group. This means that they generally do not have the possibility of planning their migration before leaving their country. According to Mazzetti (18), the lack of a migratory project is a frequent cause of malaise, and a possible risk factor increasing the likelihood of hospital admissions due to psychiatric disorders.

Regarding psychiatric diagnoses, in the male population of young PAS, the observed increase in hospitalization rates depends mainly on the increased number of "other nonorganic psychoses", which is a general and unspecific diagnostic label. The latter becomes the first diagnosis among young PAS, while in the other groups the first diagnosis is schizophrenia. This raises the possibility that diagnostic categories currently used in Western medicine may be inadequate to capture the psychopathological complexity of mental distress in PAS. The general impression is that in the frequent use of the ICD code 298 "Other nonorganic psychoses" among PAS, Italian psychiatrists implicitly stress that they are observing atypical psychotic pictures that are more difficult to include in classic categories such as schizophrenia or mood disorders.

A possible explanation that would merit further study may be that the generic diagnoses of nonorganic psychoses might in part cover the presence of severe post-traumatic reactions. Indeed, psychotic-type symptoms are frequently observed as a manifestation of post-traumatic stress disorder (PTSD) (19). This may have a dual effect. On the one hand, psychotic symptoms may conceal the post-traumatic symptoms, so psychiatrists may tend to diagnose a psychosis instead of a PTSD. On the other, psychotic symptoms in PTSD are usually atypical, with a component related to dissociative states of consciousness (20-21); this may lead Italian psychiatrists, who are not always familiar with atypical pictures associated with traumatic experiences, to prefer an open label like "Other nonorganic psychoses".

Another reason for the recurring presence of "Other nonorganic psychoses" could be related to communication problems arising with the newly-arrived PAS. Unfortunately, in Italy we do not have reliable data about the literacy levels of this population, and such

data were also unreliable in the admission data used for the present study. However, according to anecdotal observations, clinicians and other health workers in hospitals and in the Italian reception centers often report that among recently-arrived migrants there is an increasing number who are illiterate or with a very low level of education (22). Due to this lack of education, a relevant number of asylum seekers do not speak the colonial language of their countries. To communicate with them, translators from tribal languages are often required, and it is sometimes difficult to find them, mainly at the emergency services, from where several admissions occur. Miscommunication can therefore increase the risk of inappropriate admission by clinicians who may find hard to precisely define specific symptoms and features. Moreover, low educational level is in itself a risk factor for mental suffering, as a consequence of reduced resilience (23), and this may have contributed to higher hospitalization rates among PAS.

Considering the typologies of hospital admissions, it is a matter of serious concern for the Italian National Health Service that, in all groups, planned admissions are decreasing while emergency admissions are on the increase. In both immigrant groups, percentages of planned admissions are considerably lower than among Italians, in line with previous studies reporting that access to mental health care for migrants can be particularly difficult, notwithstanding the high psychiatric morbidity that exists in this population (24). Accordingly, migrants can find more difficult than Italians to access outpatient mental health services and this could lead to higher frequency of access through emergency wards.

Finally, our study showed similar percentages for compulsory treatment and for length of hospital stay for all three groups. These findings are not consistent with previous English studies, reporting that hospital admissions were longer and more often compulsory in black patients than white British (25), suggesting that further studies are needed to explore these issues in more depth.

Before concluding, the main limitations of this study should be noted. We used the official data of the Ministry of Health on hospital discharges covering the entire Italian public health system. Unfortunately, the advantage of full coverage is counterbalanced by the fact that they do not report variables that are fundamental for migration studies, e.g. legal status, reasons for emigration (migratory project), length of stay in Italy, and socio-economic status; moreover, other variables, such as education, are available in the dataset, but not reliable. Further *ad hoc* studies, including at least some of these variables, should be carried out. Due to these limitations, it is possible that some economic migrants were present also in the PAS group, so we cannot be sure that this group is homogeneous. However, such possible misclassification could have led to underestimating the effect of being an asylum seeker on hospitalization rates. Hence, the fact that the differences between groups remained strong despite this possible limitation shall be considered as a sign of the robustness of the results.

In addition, diagnoses were based on clinicians' judgment, and a certain degree of heterogeneity may exist between hospitals in coding and reporting diagnoses in hospital discharge records. Accordingly, studies using more structured procedures or rating scales in the assessment procedures might be useful.

Finally, cultural differences in clinical presentation of symptoms of mental distress, as well as different pathways leading to hospital admission, are other relevant issues that deserve further examination.

Conflict of interest

The study received no funding. All authors declare that they have no conflict of interest.

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Riassunto

Il profilo di salute mentale negli immigrati sta cambiando? Un'analisi basata sulle schede di dimissione degli ospedali italiani

Background. Vari studi indicano alti livelli di patologia mentale tra i rifugiati e richiedenti asilo arrivati in Europa, inclusi disturbi da stress post-traumatico, ansia, depressione e psicosi. Il presente studio confronta le ospedalizzazioni per disturbi mentali in migranti giunti da paesi tipicamente interessati dal fenomeno della profuganza, rispetto ai migranti provenienti da altri paesi e agli italiani.

Metodi. Lo studio si basa sulle schede di dimissione ospedaliera raccolte a livello nazionale dal Ministero della Salute. Nei tre gruppi sono stati calcolati, per le diagnosi con codici relativi a patologie mentali, i tassi di ospedalizzazione in regine ordinario standardizzati per età, nel periodo 2008-2015. Sono stati inoltre valutati il tipo di ricovero (urgente o programmato) e la durata della degenza.

Risultati. Si osserva una generale diminuzione dei tassi di ospedalizzazione per disturbi mentali, sia tra i migranti che tra gli italiani. Tuttavia, nei giovani maschi provenienti dai paesi maggiormente interessati dal fenomeno della profuganza si evidenzia un aumento (da 30,3 per 10.000 nel 2010 a 43,6 nel 2015), e questo si deve soprattutto ai ricoveri per "altre psicosi non organiche".

Conclusioni. I dati suggeriscono che il maggior carico di ospedalizzazione evidenziato possa essere determinato dal numero crescente di profughi nel gruppo considerato, e che l'aumento di ricoveri con la diagnosi aspecifica "altre psicosi non organiche" possa essere ricondotto alla difficoltà da parte degli psichiatri italiani di riconoscere i quadri psicotici atipici associati alle esperienze traumatiche.

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