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Substance use disorders and psychiatric co-morbidity in the public healthcare services of Veneto Region: State of art and epidemiological data

Felice Alfonso Nava, Giulia Bassetti*, Maria Bianco°, Mauro Filippi^, Stefano Kusstatscher§, Giuseppe Imperadore**, Marcello Mazzo♦, Marco Nuti♠, Diego Saccon♣, Francesco Sanavio°°, Claudio Pilerci⊗, Tommaso Maniscalco**

Summary

■ ***Italy has two different public healthcare services taking in care patients with dual diagnosis: (1) the* mental health services *(Centri di Salute Mentale – CSM) and (2) and the* drug abuse services *(Servizi per le Dipendenze – Ser.D.).***
We collected and analyzed data regarding the frequency of the co-morbidities in Veneto Region during 2019.
Our study shows that only the 1% of the patients in treatment in the mental health services and the 8.7% of those in drug abuse services are recognized as dual diagnosed subjects. In drug abuse services the most frequent substance use disorders (SUD) correlated with a psychiatric disease were the alcohol and opioids use disorders, while the most prevalent psychiatric disorders associated with a SUD were the personality disorders and the schizophrenia, schizotypal and delusional disorders.
Our data indicate that the diagnosis of co-morbidity should be improved in both services and that integrated programs between the above services should be developed to improve the best practices. ■

Keywords: ***Dual diagnosis, Substance use disorders, Co-morbidity.***

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Introduction

The dual diagnosed patients are subjects that are affected by a substance use disorder (SUD) and a mental health disease. This condition is also well known as co-morbidity.

** Unit of Mental health and prison health care, Health care programming service, Health and social area, Veneto Region, Venice.*
° Department of Mental Health, Public health service "Azienda ULSS 3 Serenissima", Venice.
^ Public health service "Azienda ULSS 4 Veneto Orientale", San Donà di Piave, Venice.
§ Public health service "Azienda zero", Padua.
*** Department of Mental Health, Public Health service "Azienda ULSS 9 Scaligera", Verona.*
♦ Public health service "Azienda ULSS 5 Polesana", Rovigo.
♠ National Agency for the regional health services (AGENAS), Rome.
♣ Department of Drug Abuse, Public health service "Azienda ULSS 4 Veneto Orientale, San Dona di Piave, Venice.
°° Health care and Drug abuse unit, Public health service "Azienda ULSS 6 Euganea", Padova.
⊗ Health care programming service, Health and social area, Veneto Region.

In Italy, as in most countries, patients with SUD and mental illnesses are managed separately from the drug abuse services (in Italy so called Servizi per le Dipendenze – Ser.D.) and the mental health services (in Italy so called Centri di Salute Mentale – CSM). Moreover, most of both services are not well integrated, implying a reduction in effectiveness (Murthy *et al.*, 2019).
In Italy there is no recent and systematic epidemiological data on dual diagnosed patients. Internationally, the prevalence of substance use disorders in the general population is between 7.4% and 14.3% (Grant *et al.*, 2004; Merikangas *et al.*, 1998; Merikangas & McClair, 2012; SAMSHA, 2018). The literature has also shown that SUD are often associated with other psychiatric diseases. The US National Co-morbidity Survey (NCS) has found that the 51.4% of people with a lifetime alcohol or drug use disorder also met criteria for at least one lifetime mental disorder (Kessler *et al.*, 1996; Kessler, 2000). Another study has shown that the 42.7% of persons with alcohol-drug disorders have also a mental disorder (Kessler, 2004). A recent Italian study conducted in a rural area of Liguria Region has shown that the patients with dual diagnosis in drug abuse services are 24% and of them only the 46.1% have been treated with an integrated program (Milano *et al.*, 2019).

Data from the Italian population showed that during 2019 the patients with a SUD in treatment in drug abuse services affected by a dual diagnosis are 5.9% (Relazione al Parlamento, 2021), a data that may be underestimated. Of them the 14.3% suffered of schizophrenia and correlated conditions, the 0.9% from mania and bipolar disorders, 3.1% from depression, 15.1% from neurotic and somatoform syndromes, 63.5% from personality disorders, 0.8% from dementia, 1% from mental retardation, and 1.4% from other mental diseases (Relazione al Parlamento, 2021).

The Italian literature has also shown that the drug users with dual diagnosis are strictly correlated with the self-medication theory, especially for the patients affected from schizophrenia or anxiety disorders (Maremmani *et al*., 2011).

The main aim of this study is to analysis the phenomena of dual diagnosis in the mental health and drug abuse services of Veneto Region.

Data collection

The public healthcare system in the Veneto Region delivers its service through 9 health care districts called Aziende Unità Locali Socio-sanitarie (AULSS), each of them has at least one mental health service (Centro di Salute Mentale – CSM, that are the territorial care centers part of the Department of Mental health) and one drug abuse service (Servizio per le Dipendenze – Ser.D.). Both healthcare services use to diagnose mental illnesses through the ICD-10 coding system.

Dual diagnosis was defined as the co-morbidity of a substance use disorders (SUD) (ICD-10 code F10 to F19) with a severe mental illness (SMI) as defined by the following ICD-10 codes:

(1) F20 to F29, schizophrenia, schizotypal and delusional disorders;
(2) F32 to F33 and F34.1, depressive disorders;
(3) F30 to F31, F38-39 and F34.0, F34.8, F34.9, bipolar affective disorder;
(4) F60 to F69, personality disorders;
(5) F50, eating disorders.

Our data were obtained from a regional epidemiological survey promoted in 2019 between mental health (CSM) and drug abuse services (Ser.D.) during the development of the regional clinical procedures for the management of dual diagnosed patients (Decree of the Director of health and social area, Veneto Region, n. 96, 16 September 2020).

The data were obtained from the electronical clinical records of the mental health (CSM) and drug abuse services (Ser.D.) of Veneto Region and they were referred to the patients taking in care from both services on 31 December 2019.

Results

In Veneto Region during the 2019 the patients taken in care from mental health (CSM) and drug abuse services (Ser.D.) were 67,038 and 15,275, respectively. The subjects with co-morbidities were 2,024 and their characteristics are shown in Table 1. In particular, the data indicate that only the 1% and 8.7% of the patients in treatment in mental health and drug abuse services, respectively were recognized as dual diagnosed subjects (Table 1).

Tab. 1 - Number and characteristics of dual diagnosed patients in Veneto Region

	Mental health services (CSM)	*Drug abuse services (Ser.D.)*
Patients in treatment	**67,038***	**15,275***
Dual diagnosed patients	**695**	**1,329**
Male to female ratio	**2.12: 1**	**2.42:1**
Age range	**14-83**	**15-86**
Number of SUD diagnosis per patient	**1.09**	**1.02**
Number of psychiatric diagnoses per patient	**1.06**	**1.04**

*** The number of patients may contain some bias being data reported by the health services and not recorded by an unique regionale electronical database.**

In drug abuse services (Ser.D.) the most frequent substance use disorders (SUD) are those correlated with alcohol, opioid and cocaine use, while the most prevalent psychiatric disorders are represented from personality disorders and schizophrenia, schizotypal and delusional disorders (Table 2). Interestingly, in mental health services (CSM) the most prevalent SUD are those correlated with alcohol, polydrug use, and cannabinoids (Table 2).

Consistently, in drug abuse services (Ser.D.) the most prevalent diagnoses of SUD are those correlated with alcohol, opioids and cannabinoids use, while for psychiatric disorders the most common are those represented from the personality disorders and schizophrenia, schizotypal and delusional disorders (Table 3). Interestingly, in mental health services (CSM) the patients with opioid use disorders are less represented (Table 3).

There are no clear data on the prevalence of SUD in the Italian population. At this regard the literature indicates that the prevalence of SUD in general population may be in the range of 7.4-14.3% (SAMHSA, 2018).

There are in Veneto about 4,800,000 living people (Regione del Veneto dati ISTAT, 2019). Considering the SUD prevalence, as suggested from SAMSHA (2018), we may expect to have in Veneto Region at least about 355,200 persons that may meet the diagnostic criteria for any SUD (Table 4). On the contrary, in Veneto Region the patients in treatment in the drug abuse services are only 15,275.

The national report at Italian Parliament on drug use shows that the patients in treatment in the drug abuse services are 125,428 persons (Relazione al Parlamento, 2021). In accord with the lower SAMHSA prevalence of SUD we may expect to have in Italy at least about 4 million of drug users. These data suggest that at nation level the drug abuse services are intercepting only the 3.4% of the persons with a SUD. A data that is coherent with the prevalence of drug users intercepted by drug abuse services in Veneto Region (Table 4).

Regarding the psychiatric co-morbidity the literature suggests that the prevalence of dual diagnosis is 3.7% and 1.3% for any and for the severe mental illnesses (SMI), respectively (SAMHSA, 2018). Considering these epidemiological data, we may expect to have at least in Veneto Region about 177,600 persons with any dual diagnosis and about 62,400 subjects in co-morbidity with SMI (Table 4).

Tab. 2 - Number of patients in Mental health services (CSM) and in drug addiction services (Ser.D.) for a given diagnosis

	Diagnosis	*Mental health service (CSM)*	*Drug addiction services (Ser.D.)*	*Total*
Substance use disorders and gambling	Alcohol	372	575	947
	Opioids	79	440	519
	Cannabinoids	94	82	176
	Sedative or hypnotics	26	16	42
	Cocaine	44	109	153
	Other stimulant, including caffeine	2	4	6
	Hallucingens	1	3	4
	Tobacco	2	16	18
	Volatile solvents	0	0	0
	Multiple drug use and use of other psychoactive substances	111	27	138
	Gambling	28	87	115
	Total	759	1.359	2,118
Mental illnesses	Schizophrenia, schizotypal and delusional disorders	225	301	526
	Depressive disorders	104	271	375
	Bipolar disorders	159	240	399
	Personality disorders	246	568	814
	Eating disorders	3	7	10
	Total	737	1,387	2,124

Tab. 3 - Percentage of diagnosis for substance use disorders and gambling and mental ilnness in mental health services and drug addiction services

	Diagnosis	*Mental health services (CSM) (%)*	*Drug addiction services (Ser.D.) (%)*
Substance use disorders and gambling	Alcohol	49,01	42.31
	Opioids	10,41	32.38
	Cannabinoids	12.38	6.03
	Sedative or hypnotics	3.43	1.18
	Cocaine	5.80	8.02
	Other stimulant, including caffeine	0.26	0.29
	Hallucinogens	0.13	0.22
	Tobacco	0.26	1.18
	Volatile solvents	0	0
	Multiple drug use and use of other psychoactive substances	14.62	1.99
	Gambling	3.69	6.40
	Total	100	100
Mental illnesses	Schizophrenia, schizotypal and delusional disorders	30.53	21.70
	Depressive disorders	14.11	19.54
	Bipolar disorders	21.57	17.30
	Personality disorders	33.38	40.95
	Eating disorders	0.41	0.50
	Total	100	100

Supposing that the 2,024 subjects with a dual diagnosis that are in treatment in both regional services are affected by a SMI we may hypothesize that only the 3.2% of the dual diagnosed patients that need of care are taken in treatment in Veneto Region (Table 4). A sub-trend data considering that at national level the patients in treatment from the drug abuse services are 5.9% of the whole drug users in care in the Italian drug abuse services.

The data obtained from Veneto Region also indicate that only a low percentage of patient with no severe mental illness are in treatment. In particular, the data show that only 64 diagnoses were coded as F40-F48 "Anxiety, dissociative, stress-related, somatoform and other nonpsychotic mental disorders". Since SAMSHA (2018) shows that the expected diagnosis for any

Tab. 4 - Estimated treatment gap in SUD and dual diagnosed patients in Veneto Region

	Inhabitants	*Need of care*	*Patients receiving care*
SUD	4,800,000 (100%)	355,200 (7.4%)	15,275 (4.4%)
Dual diagnosis (any)	4,800,000 (100%)	177,600 (7.4%)	Unknown
Dual diagnosis (SMI)	4,800,000 (100%)	62,400 (1.3%)	2.024 (3.2%)

mental illness (AMI), and severe mental illness associated with SUD are 47% and 16%, respectively (Table 5), we may suppose that in drug abuse services the most of patients with a mild severe psychiatric co-morbidity are not diagnosed and taken in treatment.

Tab. 5 - Expected dual diagnosis in the patients who receive care

	Diagnosed SUD	*Expected SUD + AMI*	*Expected SUD + SMI*
SUD	15,275 (100%)	7,179 (47%)	2,441 (16%)

Discussion

The data show some concerns in the management of dual diagnosed patients in Veneto Region. The most important is the difficulty from the mental health and drug abuse services to intercept and take in treatment patients with co-morbidity. In particular, the data suggest the drug abuse services (Ser.D.) have in treatment only a part of drug users with co-morbidity that need of treatment and that mental health services (CSM) do not sufficiently diagnose the SUD and the co-morbid conditions.
The data suggest 3 main limits of the actual healthcare network for the dual diagnosed patients that are: (1) a poor access to care of SUD patients in both services; (2) an inadequate assessment of dual diagnosis patients in both services; (3) the inability in most cases to integrate the treatment programs between both services.
Our data suggest that the consequences of poor treatment of dual diagnosed patients should be also due to the habit of the clinicians to diagnose only the main primary disorder, to ignore the less severe illness, and to diagnose only the "own disease" (i.e. the addictions for the drug abuse services and the psychiatric diseases for the mental health services).
The study suggests relevant indications to improve the clinical practice. The first is that the assessment process may be accurately carried out in all patients to exclude co-morbid conditions, instead to diagnose only one disorder. The second is that when one or more co-morbid conditions are found by clinicians, they should be carried out the diagnosis process using a diachronic evaluation about the age of onset, the history of the diseases, the severity of the disorders, and the correlation of the dual diagnosis with the mental illness and SUD.
The study contains some limitations. The first is of methodological order because the Ser.D. collected the data on psychiatric diseases using the ICD-9 while the CSM using the ICD-10; consequently, the ICD-9 data collected from the Ser.D. were converted in ICD-10 data. The second regard the number of patients taken in treatment from the CSM and the Ser.D. during the 2019 because the reported data showed in the present study are reported from the healthcare services and not from a unique regional electronical regionale database. At this regard recent data obtained from the clinical electronic database used from the Ser.D. (GEDI) have reported that during the 2021 were 25,536 the patients taken in treatment. The third is that the data collected were obtained from the CSM and SerD that use different electronic clinical records.
Finally, the priority actions to better organize both mental health and drug abuse services should be addressed to improve the access of care for patients with SUD and dual diagnosis, to develop diagnostic procedures for the assessment of dual diagnosis, and to plan treatment programs co-shared between services both in outcomes and in monitoring.

Conclusion

The management of dual diagnosis is a warming for the public health services. The most important concern is the treatment gap of dual diagnosis patients that need of care.
Several actions should be addressed to improve the access to care for dual diagnosed patients that are: (1) the introduction of guidelines able to improve the assessment; (2) the development of new modalities of integration between mental health (CSM) and drug abuse services (Ser.D.); (3) the use of key performance indicators in the treatment programs able to evaluate the clinical outcomes.

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