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Prevention and early intervention in mental health: a one-year analysis of activity from a Local Public Health Trust

Isabella Panaccione, Giuseppe Davì, Flavia Lombardi, Vito Mirizio, Gianluigi Di Cesare, Giuseppe Ducci

Mental Health Department, ASL Roma 1, Rome, Italy

Giuseppe Ducci

Summary

Introduction. Adolescence represents a critical period for the individual's psychic development, during which substantial neurobiological and psychosocial changes occur. It is estimated that about 70% of psychiatric conditions begin within 25 years of age and that nonspecific prodromal symptoms are already detectable several years earlier. The early identification and management of subjects at high risk of developing mental disorders or risk behaviors represent a priority within Mental Health Departments. In this study, data relating to the afference, the type of disorder identified, and treatments provided in a territorial Prevention and Early Intervention Service aimed specifically at subjects between 14 and 25 years residing in area of the Local Health Trust (ASL) Roma 1 were described.

Methods. Data concerning the services provided by the Unity from January 2020 to December 2020 to users residing in Municipalities referring to the (ASL) Roma 1 have been extrapolated from the following information systems: SISP 2000 and GDSM (territorial service and day center), SIPC- sr (residential structures).

Results. A total of 1149 subjects (53% female), representing the 1.2% of the 14-25 year-old population living within the territory of ASL Roma 1 were followed up by the service, with 486 (55% females) new outpatients during the 12 months considered. About 24% of new users had a VGF score of ≤ 50. The prevalent diagnoses for all subjects currently undergoing treatment were: neurotic disorders, 47%; personality disorders: 24%; affective disorders: 10%; psychotic disorders: 10%. One hundred thirty-three patients (11.6% of total users) were attending activities in the semi-residential service (day service), while 32 subjects were undergoing treatment in the residential facilities belonging to the unit. About 34.4% of patients reported use of substances, the most frequent being cannabis (83.3%). The ongoing COVID-19 pandemic was associated to a decrease of accesses during the first lockdown (march-april 2020), followed by a substantial rebound of referrals in autumn.

Conclusions. Evidence from the scientific literature and epidemiological data confirm the indication to intercept early and take charge of subjects at high risk or at the onset of a psychic disorder. This requires specific structures in non-stigmatizing contexts and with a multidisciplinary approach. The possibility of identifying early psychopathological and environmental risk factors is fundamental in the structuring of a timely and articulated intervention which, by limiting the duration of untreated pathology, can positively modify its trajectory and long-term outcome.

Key words: adolescence, young adults, psychiatry, community treatment, CAMHS, integrated healthcare

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Correspondence:
Giuseppe Ducci
giuseppe.ducci@aslroma1.it

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Introduction

Adolescence represents a critical period for the individual's psychic development, during which substantial physical, neurobiological, emotional, and psychosocial changes occur.

Adolescence typically begins with the onset of physiological puberty and ends when an adult identity and behaviour are developed and integrated. The World Health Organization (WHO) defines "adolescents" individuals in the 10-19 years age group and "youth" the 15-24 years age group, while "young people" covers the age range 10-24 years [1]. In general, Authors tend to subdivide this lengthy period of development into "adolescence" (10-19 years) and "young adulthood" (20-24 years) [2]. However, there is only partial consensus on this matter among researchers, and age ranges defining adolescence are still debated.

Adolescents are faced with critical biological and psychological challenges. From a neurobiological perspective, there is increasing evidence that the adolescent brain undergoes major changes in the neural systems underlying several functions, such as emotion processing and control, motivation, cognition, interpersonal interactions, and risk-versus-reward appraisal. Modifications include, but are not limited to, changes in grey matter volumes, synaptic pruning, and myelination [3]. These processes start in childhood, become significant around 14 years of age, and continue throughout time until about 25 years of age, when remodeling and myelination of crucial brain areas, such as the prefrontal cortex, are completed. Alterations in these processes, together with environmental stressors (i.e., maltreatment, neglect, bullying, and substance use, among others), might undermine the physiological transition into adulthood and underlie the increased risk for the development of psychiatric disorders in this timeframe.

It is estimated that about 70% of mental health problems in adults started during childhood and adolescence, mostly between age 14 to 24, and earlier onset is associated to a more severe course of illness and chronicity [3-6]. However, most remain undetected and untreated until later in life [7]. Mental and substance use disorders are major contributors to health-related disability in children and youth, accounting for about ¼ of all Years Lived with Disability (YLDs) [8]. Half of all mental disorders starting in adolescence are usually preceded by non-specific psychosocial disturbances [9] that may persist for months or even years, delaying detection and intervention. Additionally, adolescents represent a population at higher risk of developing mental problems when facing severe social and environmental stressors, such as the recent, ongoing COVID-19 pandemic [10-12].

Mental health problems do not only affect young people and their family and friends, but also have deep implications for their social functioning. In Europe, 15 to 20% of adolescents have at least one psychological or behavioural problem, that often continue throughout adulthood and may become chronic, with eventual implications for global economy [13]. It is estimated that a yearly loss of 4% of the European gross national product is linked to the effects of mental health problems, such as absenteeism and reduced work performance [14]. Moreover, certain conditions, such as substance use, antisocial behaviour, conduct disorders, attention deficit/hyperactivity disorder (ADHD), and neurodevelopmental disorders, are associated with early involvement with juvenile justice system [15-16]. Since effective treatments during adolescence not only affect the duration of mental health episodes, but also reduce morbidity later in life and portend a better social and functional outcome [17], prevention and early identification and intervention are crucial [6]. Young people and their caregiver often fail to find adequate help for mental health problems. This is partly due to several issues, such as perceived and self-stigmatising attitudes to mental illness, limited access, and general lack of knowledge about mental health services [18]. In addition, adolescents have different care needs than adults and children, being right in the middle of their maturation end self-identification process. In 2002, the World Health Organization issued a statement that European Union member states are required to deliver tailored and adequate mental health care (MHC) interventions to adolescents in need of help. More specifically, member states need to ensure "age-sensitive MHC services (i.e., primary and specialised health care services and social care services) operating as integrated networks" [19]. To date, however, specialised MHC facilities for adolescents are lacking.

The current service configuration, with distinct Child and Adolescent Mental Health Services (CAMHS) generally treating patients until 18 years of age, and Adult Mental Health Services (AMHS), contributes to high rates of transition-related discontinuity of care. It has been estimated that between 25% and 49% of CAMHS service users will need transitioning to AMHS [20]. However, deficiencies in planning, organisation, and policy lead to a suboptimal transition process, and treatment gaps are particularly relevant for people affected by specific conditions, such as neurodevelopmental disorders [21]. Therefore, services allowing patients to be assessed in a structured and standardised way, in order to determine the on-going need for care throughout adolescence and early adulthood, will have the potential to improve treatment retention and, by delivering intensive, multidisciplinary, and tailored interventions during a crucial developmental timeframe, lead to better outcome and quality of life [22]. Finally, it is important to note that about 15–23% of children worldwide live with a parent with a mental disorder, and that these children are at increased risk to develop several mental and social issues, such as depression, anxiety, affect dysregulation, behavioral problems, reduced overall functioning, substance abuse, and lower occupational status [23]. These observations highlight the need for parent involvement in the treatment of adolescents.

Organization of a 14-25-year-old mental healthcare service in Rome

This dedicated public mental health service has been instituted within the Mental Health Department (MHD) of the Local Health Trust "ASL Roma1" in Rome, Italy. ASL Roma 1 provides healthcare to 6 out of the 15 administrative areas (*Municipi*) in which the city of Rome is subdivided (i.e., *Municipio* 1, 2, 3, 13, 14, and 15), serving more than 1 million inhabitants. Overall, this territory is extremely diversified in terms of sociodemographic characteristics and healthcare and social needs, requiring tailored interventions.

The service is aimed to adolescents and young adults (14 to 25 years old) living in the abovementioned areas. This age range has been defined to provide continuity of care across all stages of adolescence to adulthood, as defined by the WHO, overcoming the traditional separation between CAMHS and AMHS. This configuration then guarantees to specifically address patients' needs during a developmental timeframe characterized by profound neurobiological, psychological, and social changes, whose interaction shapes future health and functional outcomes. The service implements interventions aimed to both prevention and early identification and treatment of mental problems at their onset, reducing the duration of untreated illness, with a multidisciplinary approach. It provides care programmes to patients with major psychiatric disorders, including subjects of > 18 years with ADHD and autism spectrum disorders without cognitive impairment (formerly known as "high functioning"). Treatments include psychopharmacological and psychological (both individual and group) therapy, as well as psychosocial and vocational rehabilitation, and parental support. When appropriate, treatments are carried out conjointly with other mental health services, i.e., eating disorders and addiction centers. Prompt consulting of inpatients admitted to hospital psychiatric wards is also guaranteed.

The Unit comprises two independent outpatient health centres, located within the "east" and "west" areas of ASL Roma 1, providing assessment and therapeutic continuity to patients from Municipi 1 east, 2, and 3, and 1 west, 13, 14, and 15, respectively. Each center refers to an intermediate semi-residential structure (namely the Day Centre) designed to carry out psychiatric treatment, rehabilitation, and recovery and development of patients' social skills in an informal environment. Additionally, four residential facilities directly pertain to the Unit, providing long-term residential care in close cooperation with patients' referring therapeutic team. Residential structures are organized to provide assistance of different intensity, from round-the-clock support for severely impaired patients to relatively limited care for subjects with greater levels of functioning. Further activities of the Unit comprise psychiatric and psychological consultations for the juvenile detention center in Rome, as well as counselling for most of the high schools within the ASL Roma 1 territory.

Methods

We conducted a descriptive, retrospective review of existing medical charts on outpatients referring to a Prevention and Early Intervention in Mental Health Center of ASL Roma 1 between January and December 2020. Information was extracted from the electronic databases "SISP 2000" and "GDSM" (territorial services and day centers), and "SIPC-sr" (residential facilities). Data were anonymized and each patient was identified only by a numeric code automatically generated by the system. Age, gender, ICD-9-CM diagnosis, and Global Assessment of Functioning (GAF) scores [24,25] were extracted and analyzed. Diagnoses were attributed according to ICD-9-CM [26] codes and grouped as follows: Schizophrenia and Other Psychotic Disorders (ICD-9-CM: 295.x, 297.x; 298.x; 299.x), Affective Disorders (ICD-9-CM: 296.x), Personality Disorders (ICD-9-CM: 301.x), and Neurotic Disorders (ICD-9-CM: 300.x; 307.1; 308.x; 309.x; 311.x). Groups were chosen in line with Regional Health System requirements. Patients were also grouped by age (14, 15-19 and 20-24 years) according to World Health Organization's definition of "adolescence", and "young adulthood" [1]. The age of newly incident patients ("first ever") was calculated at the time of first evaluation, whereas the age of prevalent patients was calculated at 31/12/2020. The study was conducted in accordance with the recommendations of Good Clinical Practice guidelines and the Declaration of Helsinki (1964) and subsequent revisions. All subjects (or parents/tutors, if underage) gave written informed consent.

Results

Clinical and demographic characteristics

A total of 1149 subjects (53% female), representing the 1.2% of the 14-25 year-old population living in the territory of ASL Roma 1, was treated in the Unit during the considered 12-months. Four hundred eighty-six new outpatients (55% female) referred to the service during the same timeframe.

We observed an evident reduction of new accesses in March and April, followed by a progressive increase during the subsequent months, and in August, with a peak of new accesses during autumn. The course of new referral by month is shown in Figure 1.

The most frequent reasons for new referrals were: neurotic disorders, 262 (54%); personality disorders, 87 (18%); affective disorders: 46 (9%); psychotic disorders 40 (8%). The prevalent diagnoses for all subjects currently undergoing treatment were: neurotic disorders, 47%; personality disorders: 24%; affective disorders: 10%; psychotic disorders: 10%. Twenty-four percent of new users had a GAF score of ≤ 50, thus displaying severe symptomatology and functional impairment. Data are summarized in Tables I-V. Among prevalent subjects, 56 (4.9%) were diagnosed with conduct disorders (ICD-9-CM: 312.x) with a higher rate of

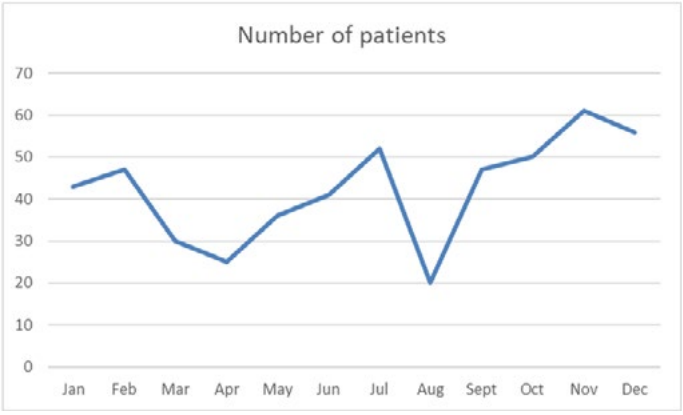

Figure 1. Course of "first ever" patients by month.

Table I. Incident patients (age, gender).

Age (years)	Gender					
	Male		Female		Total	
	n	%	n	%	n	%
14	6	3%	14	5%	20	4%
15-19	128	58%	148	56%	276	57%
20-24	82	37%	96	36%	178	37%
≥25	4	2%	8	3%	12	2%
Total	220	100%	266	100%	486	100%
%	45%		55%		100%	

males (n = 38, 67.8%; mean age 18.6 ± 1.9 years) over females (n = 18, 32.2%; mean age 18.7 ± 2.9 years). Additionally, 10 patients (0,87%; M = 9, F = 1; mean age 18.7±1.6 years) were diagnosed with ADHD (ICD-9-CM: 314.x), whereas 12 patients (1.04%; M = 9, F = 3; mean age: 21.7 ± 1.9 years) had autism spectrum disorders (ICD-9-CM: 299.0x, 299.8x). More than a half (55%) of newly incident patients self-referred to the service, while 19% were sent from other mental health services or were inpatients about to be discharged from hospital wards with subsequent need of continuity of care.

Seventy-three percent of subjects with psychotic disorders was treated by ≥ 3 different healthcare professionals (i.e., psychiatrist, psychologist, nurse, social worker, etc.), compared to 56% of affective disorder patients, 46% of personality disorder patients, and 21% of neurotic disorders patients. The number of healthcare professionals involved in treatments was also higher in patients with lower GAF scores, with ≥ 3 different healthcare professionals required in 65% of patients with GAF ≤ 50, regardless of diagnosis.

About 34.4% of patients (males: 62.7%; females: 37.3%) reported recreational use (at least once per week) of substances. The most frequently assumed drugs were cannabis (83.3%), alcohol (55.3%), cocaine and other stimulants (27.1%). However, only 11.3% of patients reporting frequent use of substances accepted to also refer to specific addiction services.

Finally, about 6% of patients was referred to the service from public security and justice Institutions, including juvenile/family court. Overall, a slightly higher rate (about 9%) of patients were involved in some kind of justice problems, from mild (i.e., drug possession) to severe (i.e., aggression), with a predominance of males (77%).

Day center and residential treatments

One hundred thirty-three patients (11.6%) were attending therapeutic-rehabilitation activities in the day centers (males: 49; 44%; females: 74; 56%), 52 of which entered the programme during the current year, while 32 subjects were undergoing residential treatment in facilities belonging to the unit. Thirty-one additional patients were treated in other residential centers throughout Italy; 86% of these patients were comorbid for substance use disorders.

Discussion

In this study, we describe demographic and clinical characteristics of patients treated in a mental health service

Table II. Incident patients (diagnosis, age).

Diagnosis	Age (years)									
	14		15 - 19		20 - 24		≥ 25		Total	
	n	%	n	%	n	%	n	%	n	%
Psychotic disorders		0%	12	4%	27	15%	1	13%	40	8%
Affective disorders	1	5%	28	10%	17	9%		0%	46	9%
Personality disorders		0%	55	20%	31	17%	1	13%	87	18%
Neurotic disorders	17	85%	151	54%	88	50%	6	25%	262	54%
Other disorders	1	5%	13	5%	5	3%		0%	19	4%
Non psychiatric	1	5%	16	6%	9	5%	1	13%	27	6%
Unknown/missing		0%	1	0%	1	1%	3	38%	5	1%
Total	20	100%	276	100%	178	100%	12	100%	486	100%

Table III. Incident patients (diagnosis, GAF scores).

Diagnosis	GAF scores											
	≤ 30		≤ 50		≤ 70		> 70		Unknown/ missing		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Psychotic disorders	9	39%	21	23%	7	2%	0	0%	3	11%	40	8%
Affective disorders	4	17%	13	14%	25	8%	2	6%	2	7%	46	9%
Personality disorders	3	13%	24	27%	52	17%	3	9%	5	19%	87	18%
Neurotic disorders	3	13%	26	29%	200	64%	23	71%	10	37%	262	54%
Other disorders	4	17%	4	4%	10	3%	1	3%	0	0%	19	4%
Non-psychiatric	0	0%	2	2%	16	5%	5	12%	4	15%	27	6%
Unknown/missing	0	0%	0	0%	2	1%	0	0%	3	11%	5	1%
Total	23	100%	90	100%	312	100%	34	100%	27	100%	486	100%
%	5%		19%		64%		7%		6%		100%	

Table IV. Prevalent patients (age, gender).

Age (years)	Gender					
	Male		Female		Total	
	n	%	n	%	n	%
14	2	0.4%	8	1%	10	1%
15-19	217	41%	258	42%	475	41%
20 - 24	265	49.6%	294	48%	559	49%
≥ 25	51	10%	54	9%	105	9%
Total	535	100%	614	100%	1149	100%
%	47%		53%		100%	

specifically aimed at adolescents and young adults. During the considered period (January-December, 2020), more than one thousand patients received healthcare, and almost 500 new subjects ("first ever") accessed clinical attention, with a slight prevalence of females.

The number of monthly accesses was not constant, with an evident decrease during march and april and a high-point in autumn. This reduction overlaps with the outbreak of COVID-19 pandemic in Italy and subsequent implementations of emergency containment measures from the Government. During this timeframe, regular clinical activities were guaranteed, although with some modifications in line with Government dispositions. However, many patients cancelled their appointments, postponing or waiving treatment. Motivations for this behaviour are unclear. It might be hypothesized that some people gave up reaching the center out of fear of contagion, whereas others might have changed their perception of their own mental status and need for immediate care. However, these remain speculations, and conclusions cannot be drawn. Referrals' decrease in august, in contrast, was predictable and constant over the years, being related to partial reduction of clinical activities and to highest rate of people leaving the city for summertime holydays.

Table V. Prevalent patients (diagnosis, GAF scores)

Diagnosis	GAF scores											
	≤ 30		≤ 50		≤ 70		> 70		Unknown/ missing		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Psychotic disorders	22	39%	64	20%	31	4%	1	2%	11	15%	129	10%
Affective disorders	9	16%	47	14%	58	8%	4	7%	7	10%	125	10%
Personality disorders	10	18%	105	32%	167	22%	6	10%	17	24%	305	24%
Neurotic disorders	7	13%	85	26%	444	59%	41	71%	20	28%	597	47%
Other disorders	7	13%	17	5%	21	3%	1	2%	2	3%	48	4%
Non-psychiatric	1	2%	6	2%	21	3%	5	9%	9	13%	42	3%
Unknown/missing	0	0%	2	1%	14	2%	0	0%	6	8%	22	2%
Total	56	100%	326	100%	756	100%	58	100%	72	100%	1268	100%
%	4%		26%		60%		5%		6%		100%	

The main reason for treatment-seeking was neurotic disorders (i.e., anxiety disorders, panic disorders), a result in line with previous reports [27]. This might also partially explain the observed gender differences, since neurotic disorders tend to be more frequent in females.

About 5% of our sample was diagnosed with conduct disorder, while ADHD and neurodevelopmental disorders were less represented. In all three groups, we observed a predominance of males, a result in line with other reports [28-30]. Despite increasing awareness on these conditions is leading to better identification, the overall number of patients remains quite low. This might be partially due to the fact that the majority of these patients is usually first treated in CAMHS and might be either discharged at the end of treatment, or lost during transition to other care facilities.

More than a half of help-seeking patients was self-referred. A significant rate (about 1/5) reached the service from either other healthcare providers belonging to the Trust or from hospital psychiatric wards, thus indicating a good continuity of care between different services.

Most patients (75,3%) were offered a combined treatment with at least two different healthcare professionals involved. In particular, psychotic disorder patients displayed a high rate of service utilisation, with more than 70% of them being treated by teams of 3 or more professionals.

In our sample, 65% of patients with GAF ≤ 50 required treatment from at least 3 different healthcare professionals. Although this might appear quite intuitive, it is still interesting to note that patients with "non severe" diagnosis account for about one third of all patients with GAF ≤ 50, highlighting the importance of functional impairment in terms of healthcare burden and service utilisation. Many neurotic or conduct disorder patients might display significant difficulties in relations and school performance, and might therefore require intensive, multidisciplinary interventions to prevent social isolation and school dropout.

More than 1/3 of patients reported regular consumption of substances of abuse, especially cannabis (83.3%) and alcohol (55.3%). Interestingly, the rate of cannabis use in our sample is in line with previous reports on Italian secondary school students [31], hinting at a dramatic diffusion of cannabis consumption within this age range regardless to mental health status. Substance use among adolescent represents a significant public health problem. According to the latest ESPAD report, substance use has risen over the years, with earlier age of first intake and a progressive narrowing of gender gap, as females increased drug and alcohol consumption [32,33]. Comorbidity of psychiatric disorders and substance use leads to increased symptom severity, worse course of illness, lower functioning, and detrimental outcomes. Additionally, epidemiological data show that about one third of underages accessing Emergency Departments in Lazio were diagnosed with substance use disorders [34]. However, despite this evidence, only a minority of patients with co-occurring substance use refers to specific addiction services. This might be due, at least in part, to insufficient awareness on this problem and its consequences. Stigmatization towards addiction care services might also play a role.

About one out of 10 patients was involved in some kind of justice problems. Although increasing evidence points out that psychiatric patients are not more likely to commit crimes [35], associations have been found between certain psychiatric diagnosis (i.e., ADHD, antisocial personality disorder, conduct disorders, substance use, and neurodevelopmental disorders) and higher rate of contact with juvenile justice systems [15,16]. In this perspective, early identification and treatment of these conditions might prevent at-risk behaviours and involvement in illegal activities, offence, and crime, other than representing a crucial step in effective rehabilitation and social reintegration.

Young adulthood is a unique and critical period of development during which unmet health needs and disparities in access to appropriate care are high. Although it is well known that most mental and substance use disorder onset in adolescence, early identification and treatment might be challenging. Subjects might display several non-specific prodromic symptoms before a clear diagnosis can be made, leading to delays and undertreatment. Additionally, clinical presentation is often complex and comes at the interplay of many different neurobiological and environmental factors, each playing a significant role in determining future trajectories of the illness. Several alternative classification criteria have been proposed to better address this variety of presentations (i.e., internalizing vs externalizing disorders), focusing more on psychopathological dimensions, such as impulsivity and emotional dysregulation, and overall functioning. Finally, clinicians must face significant new challenges, like the substantial increase of "newly emerging" mental disorders, such as Internet, gaming, and smartphone addictions, or severe social retirement (i.e., "hikikomori"), for which standardized treatments are still not available and are often associated with high rates of school dropout and "NEET" (*Not in Education, Employment, or Training*).

Although in recent years many international organizations, such as WHO, repeatedly pointed out the urgent need for implementing mental health care addressing adolescents' and young adults' specific needs, and substantial efforts have been made in many Countries, the availability of dedicated services is still insufficient. This is also associated with a significant rate of dropouts and inadequate deliver of care during transitions from CAMHS to AMHS. Another critical aspect is the reduced availability of psychiatric wards for underages in hospitals, as well as of dedicated residential facilities, that limit both the safe management of critical episodes and the possibility of effective long-term rehabilitation.

Improvement of the general health, family conditions (e.g., through parental support) and school environment has been demonstrated to show beneficial effect on youth mental health. Preventive interventions require integrated socio-sanitary policies aimed at promoting healthy life-

styles of adolescents and increasing awareness of their behaviours. Finally, epidemiological surveys should be carried out, in order to inform appropriate resource allocation and support policies that address mental health needs of this population [36].

This study has some limitations that must be acknowledged. First, the quality of data, which depends on a correct data entry from the single professional. Consistency on attribution of diagnosis and GAF scores could not be evaluated. The same patient might require more than one treatment over the years and might be attributed different diagnosis as the disease unfolds, leading to a discrepancy between the number of subjects treated and the number of active treatments/diagnosis among prevalent patients. Due to characteristics of the informatic system, information about comorbidity is limited. Finally, these results relate to a specific group of patients (14-25 years old subjects living in a defined urban area), which limits their generalizability to other clinical populations.

Conclusions

This descriptive study outlines the clinical characteristics and utilisation rates of patients referring to a center specifically designed to offer mental care to adolescents and young adults, delineating an accurate picture of a service which is both innovative in its organization and significant in terms of healthcare provided.

Implementation of mental health services specifically aimed to adolescents and young adults is crucial for delivering adequate support throughout this critical neurodevelopmental period, when the early identification and availability of tailored, multidisciplinary interventions might prevent the onset of severe mental disorders and dramatically modify illness trajectories, reducing chronicization. Working in network with additional healthcare providers, including hospitals, other mental health services (i.e., CAMHS, AMHS, eating disorders services, addiction services, etc.), and GPs, is crucial to deliver comprehensive treatments and to avoid dropouts during transitions between services. Additionally, healthcare centers easily accessible, designed to address youth specific needs, and deeply integrated with other public Institutions within the community (i.e., schools) might reduce stigmatization and encourage referrals, reaching a wider number of subjects and effectively promoting well-being.

References

1 World Health Organization. Young people's health – a challenge for society Report of a Study Group on Young People and Health for All by the Year 2000. Technical Report Series, No 731. Geneva: World Health Organization 1986. http://whqlibdoc.who.int/trs/WHO_TRS_731.pdf

2 Arnett JJ. Emerging adulthood: a theory of development from the late teens through the twenties. Am Psychol 2000;55:469-480.

3 Paus T, Keshavan M, Giedd JN. Why do many psychiatric disorders emerge during adolescence? Nat Rev Neurosci 2008;9:947-957.

4 Kessler RC, Berglund P, Demler O, et al. Lifetime Prevalence and Age-of-Onset Distributions of DSM-IV Disorders in the National Comorbidity Survey Replication. Arch Gen Psychiatry 2005;62:593-602.

5 Kessler RC, Amminger GP, Aguilar-Gaxiola S, et al. Age of onset of mental disorders: a review of recent literature. Curr Opin Psychiatry 2007;20:359.

6 De Girolamo G, Dagani J, Purcell R, et al. Age of onset of mental disorders and use of mental health services: needs, opportunities and obstacles. Epidemiol Psychiatr Sci 2012;21:47-57.

7 World Health Organization. Health for the World's Adolescents – a Second Chance in the Second Decade. World Health Organization: Geneva, Switzerland 2014. Available at: www.who.int/maternal_child_adolescent/documents/second-decade/en/

8 Erskine HE, Moffitt TE, Copeland WE, et al. A heavy burden on young minds: the global burden of mental and substance use disorders in children and youth. Psychol Med 2015;45:1551-1563.

9 Colizzi M, Lasalvia A, Ruggeri M. Prevention and early intervention in youth mental health: is it time for a multidisciplinary and trans-diagnostic model for care? Int J Ment Health Syst 2020;14:23.

10 Loades ME, Chatburn E, Higson-Sweeney N, et al. Rapid Systematic Review: the Impact of Social Isolation and Loneliness on the Mental Health of Children and Adolescents in the Context of COVID-19. J Am Acad Child Adolesc Psychiatry 2020;59:1218-1239.

11 Nearchou F, Flinn C, Niland R, Subramaniam SS, Hennessy E. Exploring the Impact of COVID-19 on Mental Health Outcomes in Children and Adolescents: a Systematic Review. Int J Environ Res Public Health. 2020;17:8479. Published 2020 Nov 16. https://doi.org/10.3390/ijerph17228479

12 Orben A, Tomova L, Blakemore SJ. The effects of social deprivation on adolescent development and mental health. Lancet Child Adolesc Health 2020;4:634-640.

13 Sawyer SM, Afifi RA, Bearinger LH, et al. Adolescence: a foundation for future health. Lancet 2012;379:1630-40.

14 Layard R. How mental illness loses out in the NHS. A report by the Centre for Economic Performance's Mental Health Policy Group. CEP Special Papers 26, Centre for Economic Performance, LSE, 2012.

15 National Institute for Health and Care Excellence. Antisocial behaviour and conduct disorders in children and young people: recognition and management. London: National Institute for Health and Care Excellence (UK) 2017 Apr. PMID: 32073810.

16 Borschmann R, Janca E, Carter A, et al. The health of adolescents in detention: a global scoping review. Lancet Public Health 2020;5:e114-e126.

17 Patton GC, Coffey C, Romaniuk H, et al. The prognosis of common mental disorders in adolescents: a 14-year prospective cohort study. Lancet 2014;383:1404-1411.

18 Gulliver A, Griffiths KM, Christensen H. Perceived barriers and facilitators to mental health help-seeking in young people: a systematic review. BMC Psychiatry 2010;10:113.

19 World Health Organization. Adolescent mental health: Mapping actions of nongovernmental organizations and other international development organizations. World Health

Organization: Geneva, Switzerland, 2002. Available at: www.who.int/mental_health/publications/adolescent_mental_health/en/

[20] Signorini G, Singh SP, Marsanic VB, et al. The interface between child/adolescent and adult mental health services: results from a European 28-country survey. Eur Child Adolesc Psychiatry 2018;27:501-511.

[21] Hill A, Wilde S, Tickle A. Review: Transition from Child and Adolescent Mental Health Services (CAMHS) to Adult Mental Health Services (AMHS): a meta-synthesis of parental and professional perspectives. Child Adolesc Ment Health 2019;24:295-306.

[22] Santosh P, Adams L, Fiori F, et al. Protocol for the development and validation procedure of the managing the link and strengthening transition from child to adult mental health care (MILESTONE) suite of measures. BMC Pediatr 2020;20:167.

[23] Reedtz C, van Doesum K, Signorini G, et al. Promotion of Wellbeing for Children of Parents With Mental Illness: A Model Protocol for Research and Intervention. Front Psychiatry 2019;10:606.

[24] Jones SH, Thornicroft G, Coffey M, et al. A brief mental health outcome scale-reliability and validity of the Global Assessment of Functioning (GAF). Br J Psychiatry 1995;166:654-659.

[25] Schorre BE, Vandvik IH. Global assessment of psychosocial functioning in child and adolescent psychiatry. A review of three unidimensional scales (CGAS, GAF, GAPD). Eur Child Adolesc Psychiatry 2004;13:273-286.

[26] National Center for Health Statistics (U.S.), Council on Clinical Classifications., Commission on Professional and Hospital Activities, & World Health Organization. The International classification of diseases, 9th revision, clinical modification: ICD. 9. CM. Ann Arbor, Mich: Commission on Professional and Hospital Activities 1978.

[27] Kessler RC, Avenevoli S, Costello EJ, et al. Prevalence, Persistence, and Sociodemographic Correlates of DSM-IV Disorders in the National Comorbidity Survey Replication Adolescent Supplement. Arch Gen Psychiatry 2012;69:372-380.

[28] McCabe KM, Rodgers C, Yeh M, et al. Gender differences in childhood onset conduct disorder. Dev Psychopathol 2004;16:179-192.

[29] Ramtekkar UP, Reiersen AM, Todorov AA, et al. Sex and age differences in attention-deficit/hyperactivity disorder symptoms and diagnoses: implications for DSM-V and ICD-11. J Am Acad Child Adolesc Psychiatry 2010;49:217-228.

[30] Zhang Y, Li N, Li C, et al. Genetic evidence of gender difference in autism spectrum disorder supports the female-protective effect. Transl Psychiatry 2020;10:429.

[31] Di Nicola M, Ferri VR, Moccia L, et al. Gender Differences and Psychopathological Features Associated With Addictive Behaviors in Adolescents. Front Psychiatry 2017;8:256.

[32] The ESPAD Group. ESPAD Report 2015: Results from the European School Survey Project on Alcohol and Other Drugs. Lisbon: European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) (2016). Available from: www.emcdda.europa.eu/publications/joint-publications/emcdda-espadreport_en

[33] Johnson RM, Fairman B, Gilreath T, et al. Past 15-year trends in adolescent marijuana use: differences by race/ethnicity and sex. Drug Alcohol Depend 2015;1:8-15.

[34] SINPIA (Società italiana di Neuropsichiatria dell'Infanzia e dell'Adolescenza), 2014. Politiche del Sistema Integrato in favore della salute mentale di bambini e adolescenti. www.consiglio.regione.lazio.it/binary/consiglio_regionale/tbl_commissioni_documenti/OsservSINPIALAZIO_28_1_2014.pdf. Last accessed: 20 february 2021

[35] Ghiasi N, Azhar Y, Singh J. Psychiatric Illness And Criminality. In: StatPearls. Treasure Island (FL): StatPearls Publishing June 23, 2020.

[36] Erskine HE, Baxter AJ, Patton G, et al. The global coverage of prevalence data for mental disorders in children and adolescents. Epidemiol Psychiatr Sci 2017;26:395-402.