

OUTPATIENT CARE IN PSYCHIATRY FOR TRANSITIONAL AGE YOUTH (16 TO 24 YEARS OLD): WHICH TRAJECTORIES OF PSYCHIATRIC CARE IN FRENCH-SPEAKING BELGIUM?

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SUMMARY

Background: Transitional age youth (TAY) are a particularly at-risk population in mental health. They have specific needs, not currently covered between child and adolescent mental health services (CAMHS) and adult mental health services (AMHS), mainly because of existing barriers. This retrospective study was carried out to describe sociodemographic and clinical characteristics of patients who attended a new outpatient program specifically conceived for TAY in Brussels, Belgium. Outcomes related to trajectories of psychiatric care were analysed, such as leading symptom, consultation's referral and requester, and final orientation.

Subjects and methods: The total sample included 243 patients aged from 16 to 24 years old who presented for care in this outpatient program between October 2019 and May 2021. Data were retrospectively extracted from each patient's electronic medical records.

Results: The sample was mainly composed by female participants; the average age was 18.7 (± 2.0) years. General practitioner (18.9%), child and adolescent psychiatrist (18.1%), psychologist (11.5%) and adult psychiatrist (7.4%) referred patients. Leading symptoms were divided into three dimensions: internalizing (67.5%), externalizing (21.8%) and psychotic (10.7%) ones. After first assessment, 81.5% of youth were followed-up in our specific outpatient program. Overall, at the end of data collection, youth were orientated towards ongoing follow-up in this program (37%), AMHS care (21.8%), end of psychiatric care (17.3%) and CAMHS care (4.1%). 19.8% patients discontinued the proposed care.

Conclusions: This psychiatric outpatient program for TAY represents an innovative contribution to reinforce CAMHS-AMHS interface in French-speaking Belgium. The analysis of trajectories in psychiatric care suggests positive outcomes of this TAY-tailored clinical program to achieve high quality standard of care in youth mental health. Future research and clinical implementation programs should further explore which factors influence decision-making process in TAY psychiatric assessment and care.

Key words: transitional age youth - mental health - outpatient care - psychiatry

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INTRODUCTION

Adolescents and young adults represent a population-at-risk in terms on mental health. Mental disorders occurring during childhood or adolescence affect patients' brain development (Andersen 2016), their educational and employment trajectories (Veldman et al. 2015) and are associated with adverse life events (Jivanjee & Kruzich 2011). The age of onset of any mental disorders is under 25 in 62.5% of the cases and before 18 years old in 48.4% of the cases (Solmi et al. 2021). Thus, early-stages intervention in mental health is crucial, as it seems promising in modifying long-term outcomes of mental disorders and reducing the illness severity (McGorry et al. 2018). This strategy has been proved effective and, if widely adopted, would lead to an overall decrease in personal and socioeconomic burden of mental health problems (McGorry & Mei 2018).

Since mental health care is traditionally assigned to child and adolescent mental health services (CAMHS) and adult mental health services (AMHS) according to patient's age, adolescents and young adults experience the poorest access to mental health services worldwide

(McGorry et al. 2013). Following this observation, a growing need to reinforce CAMHS-AMHS interface emerged. Many efforts have been made to conceive protocols for well-managed transition from CAMHS to AMHS. To date, in clinical settings of many European countries, transitional age youth (TAY) psychiatric care needs still remain unmet (Signorini et al. 2018, Singh et al. 2008). In French-speaking Belgium, in response to the lack of mental health care for TAY, an outpatient psychiatric program has been specifically designed for youth aged from 16 to 24 years old. This new program is active since October 2019 in four psychiatry services, both CAMHS and AMHS, in urban area of Brussels (Belgium).

The aim of this study is to establish a sociodemographic and clinical profile of TAY, presenting for care, at this outpatient program. The analysis of trajectories of psychiatric care will be presented in details.

SUBJECTS AND METHODS

This retrospective study investigated the sociodemographic and clinical characteristics of a sample of TAY who required care, in an innovative specific psychiatric

outpatient consultation designed for youth between 16 and 24 years old. The program is set in one secondary CAMHS, in two tertiary CAMHS and in one tertiary AMHS. The outpatient program offers both psychiatric assessment and care. The patient could be referred by health care professionals advising for a psychiatric consultation. Concerning the main requester the consultation, TAY may require it spontaneously or via their entourage. Clinicians evaluated the need for a medical orientation. If needed, youth could be oriented towards follow-up in TAY program, CAMHS care or AMHS care.

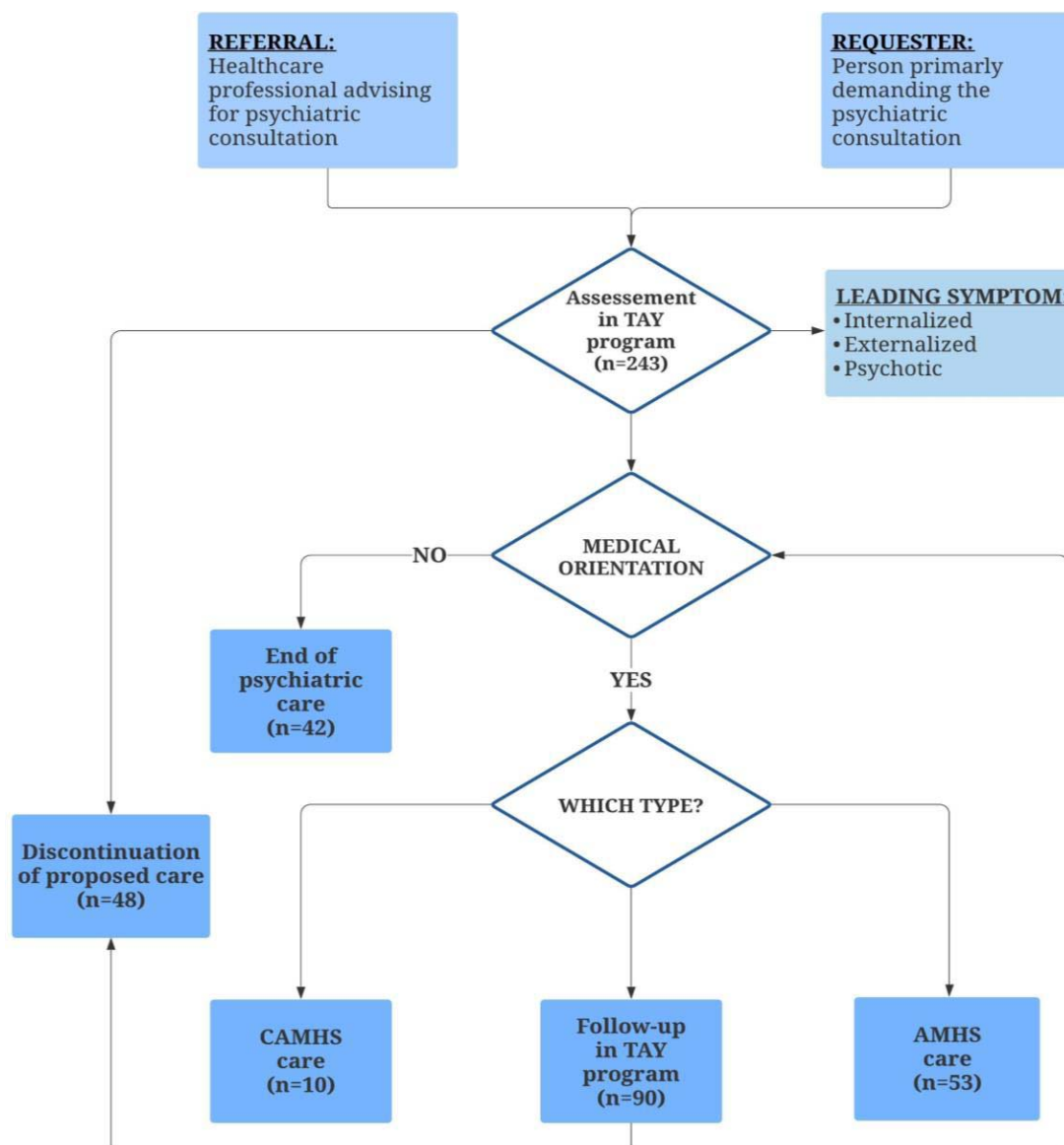
Ethical considerations

This study protocol was reviewed and approved by Ethic Committees of the Queens Fabiola Children's University Hospital, the Brugmann University Hospital

and the Erasme Hospital, in **Brussels**. All patients received in this outpatient program signed an inform consent about their willingness to accept or to refuse that their anonymized data could be used for research purpose. This information is recorded in patients' electronic medical record and those who explicitly refused were excluded from the study.

Procedure

All patients assessed in this TAY psychiatric outpatient program between October 2019 and May 2021 were included except those who refused to participate in research studies. The final sample included 243 patients. Research assistants consulted all patients' **electronic medical record and data were retrospectively** collected during summer 2021.



Abbreviations: AMHS - Adult Mental Health Services; CAMHS - Child and Adolescent Mental Health Services; TAY - Transitional age youth

Figure 1. Transitional age youth's trajectories in psychiatric care

Outcomes

Patient's initial psychiatric assessment (n=243) was conducted following the model of the Child and Adolescent Psychiatric Assessment (Angold et al. 1995). The leading symptom that prompt the consultation request of care was classified in three main dimensions, according to a dimensional classification of mental disorders (Caspi & Moffitt 2018): the internalizing symptoms (including anxious and depressive symptoms); the externalized symptoms (including addictive behaviors, non-suicidal self-injuries, hetero-aggressive behaviors) and the psychotic symptoms (both negative and positive ones). Concerning the referral to the consultation, defined as the healthcare professional who advised to consult a psychiatrist, several types of healthcare professionals were involved: professionals from the mental health field (child and adolescent psychiatrists, adult psychiatrists, psychologists) or from different medical specialties (general practitioners, pediatricians, neurologists, others). The requester was considered as the person who asked for the consultation, including the youth, the family or other non-health related professionals (education, justice and social workers). Medical orientation, after a first period of assessment in the outpatient psychiatric TAY program, was evaluated. Some patients did not need further psychiatric care (n=42), while other did. Three types of clinical orientation could be possible: CAMHS care (n=10), follow-up in outpatient TAY program (n=90) or AMHS care (n=53). At any point of the assessment or the follow-up in TAY program, discontinuation of proposed care could happen (n=48) (Figure 1).

Statistical analysis

Data were analysed using the Statistical Package for the Social Sciences Version 27 (SPSS, Inc., Chicago, IL, USA). Descriptive statistics was used to characterize the study sample, including sociodemographic and clinical characteristics. Between-group comparisons of categorical variables were analysed using χ^2 test. Continuous variables were compared among groups using independent t-test or one-way ANOVA. Post-hoc analyses of group means were conducted using Scheffé's method. Significance level was set at 0.05.

RESULTS

Sociodemographic characteristics

The sociodemographic characteristics of the patients received in the TAY's psychiatric program is presented in Table 1.

A total of 243 patients were evaluated between October 2019 and May 2021. The majority of participants were female (59.3%; n=144), born in Belgium (80.4%; n=193). At the first appointment, the mean

age of participants was 18.7 (± 2.0) years, with no significant differences between men and woman ($t=0.093$; $p=0.926$). Approximately three-quarters of patients (77.2%; n=186) reported being enrolled in some form of academic education: more than half attended secondary school (57.7%; n=139) and 14.4% (n=35) attended higher education. About 1 out of 10 patients (11.1%; n=27) were on sick leave, at the time of the first psychiatric appointment. The type of academic cursus did not differ according to sex ($\chi^2=6.632$; $df=4$; $p=0.157$), neither the presence nor absence of some form of academic education ($\chi^2=3.367$; $df=1$; $p=0.085$). More than 9 out of 10 patient (92.1%; n=223) did not report any work activity, with no significant differences between men and woman ($\chi^2=0.022$; $df=1$; $p=1.000$).

Arrival to the TAY program and leading symptom

The referrer to our psychiatric outpatient program was a general practitioner in 18.9% of cases, a child and adolescent psychiatrist for 18.1% of subjects, a psychologist for 11.5% of patients, and an adult psychiatrist for 7.4% of patients. In 37.4% of cases, no referral was defined, while other type of referral (neurologist, pediatrician...) accounted for 6.5% of youth. A large majority of consultations were carried out at the request of the young adult (47.3%) or the family (39.1%), whereas 13.6% cases presented other type of requesters (school, justice, social or none).

At the time of the first appointment, 67.5% of the sample reported internalizing symptoms, 21.8% reported externalizing symptoms and 10.7% reported psychotic symptoms (Table 2).

Table 1. Summary of sociodemographic characteristics of the sample (n=243)

Variable	Value
Sex	
Female	59.3 % (n=144)
Male	40.7 % (n=99)
Mean (SD) Age	18.7 (2.0)
Country of birth*	
Belgium	80.4 % (n=193)
Another country	19.6 % (n=47)
Academic education**	
Secondary education	57.7 % (n=139)
Higher education	14.5 % (n=35)
Another education activity	5.0 % (n=12)
Sick leave	11.2 % (n=27)
No education activity	11.6 % (n=28)
Working status***	
Full-time job	2.5 % (n=6)
Part-time job	5.4 % (n=13)
No working activity	92.1 % (n=223)

* 3 cases missing data ; ** 2 cases missing data;

*** 1 case missing data

Table 2. Analysis of differences between leading symptoms and sociodemographic characteristics

Variable	Internalizing Symptom 67.5 % (n=164)	Externalizing Symptom 21.8 % (n=53)	Psychotic Symptom 10.7 % (n=26)	Test
Sex				
Female	77.1 % (n=111)	16.7 % (n=24)	6.3 % (n=9)	$\chi^2=15.649$; $p \leq 0.001$
Male	53.5 % (n= 53)	29.3 % (n=29)	17.2 % (n=17)	
Mean (SD) Age	18.7 (2.0)	18.3 (1.9)	19.9 (2.1)	$F(2, 240) = 5.275$; $p=0.006$
Country of Birth*				
Belgium	67.4 % (n=130)	24.4 % (n=47)	8.3 % (n=16)	$\chi^2=8.193$; $p=0.016$
Another country	66.0 % (n=31)	12.8 % (n=6)	21.3 % (n=10)	

The *italics* values in table indicate statistically significant results; * 3 cases missing data

Table 3. Analysis of decision to follow-up in TAY program according to sociodemographic and clinical characteristics

Variable	Follow-up: Yes 81.5 % (n=198)	Follow-up: No 18.5 % (n=45)	Test
Sex			
Female	84.7 % (n=122)	15.3 % (n=22)	$\chi^2=2.460$; $p=0.081$
Male	76.8 % (n=76)	23.2 % (n=23)	
Mean (SD) Age	18.8 (2.0)	18.1 (1.9)	$t=2.223$; $p=0.027$
Leading Symptom			
Internalizing	83.5 % (n=137)	16.5 % (n=27)	$\chi^2=4.660$; $p=0.092$
Externalizing	71.7 % (n=38)	28.3 % (n=15)	
Psychotic	88.5 % (n= 3)	11.5 % (n=3)	

The *italics* values in table indicate statistically significant results

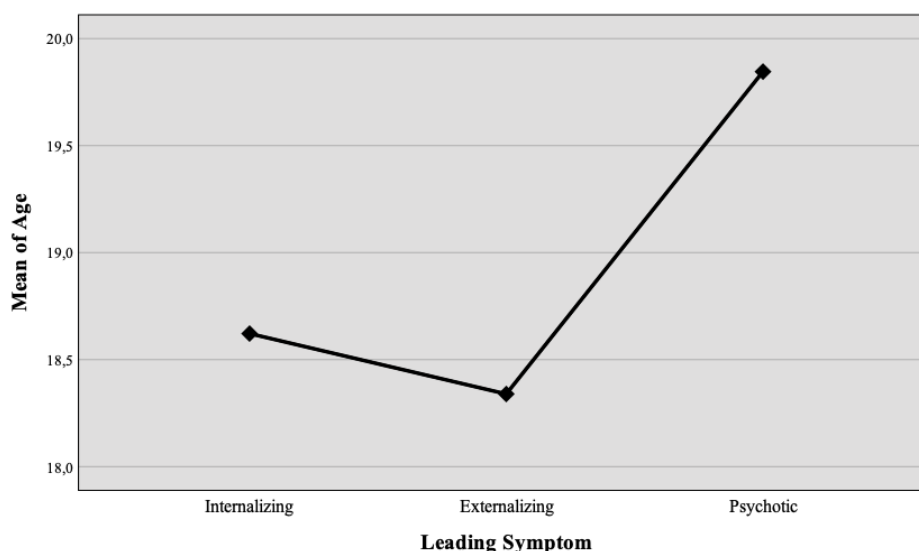


Figure 2 shows the results of the one-way ANOVA analysis for the effect of the leading symptom on the mean age of the participant at the time of the first appointment ($F(2, 240) = 5.275$; $p = 0.006$). Post-hoc Scheffé test revealed that patients presenting psychotic symptoms were significantly older ($M=19.9$; $SD=2.0$) than patients presenting internalizing ($M=18.6$; $SD=2.0$) and externalizing symptoms ($M=18.3$; $SD=1.9$), with $p=0.016$ and $p=0.008$, respectively. Significance level was set at 0.05.

Figure 2. Analysis of the variance between youth's age and leading symptom

The type of leading symptom differed according to sex ($\chi^2=15.649$; $df=2$; $p \leq 0.001$), with internalizing symptoms more frequent in women than in men (77.1% vs. 53.5%), externalizing symptoms more frequent in men than in women (29.3% vs. 16.7%) and psychotic symptoms more frequent in men than in women (17.2% vs. 6.3%). An analysis of the variance showed that the effect

of the leading symptom on the age of the participants, at the time of the first appointment, was significant ($F(2, 240) = 5.275$; $p=0.006$); patients presenting psychotic symptoms were significantly older ($M=19.9$; $SD=2.0$) than both patients presenting internalizing ($M=18.6$; $SD=2.0$) and externalizing symptoms ($M=18.3$; $SD=1.9$), with $p=0.016$ and $p=0.008$, respectively (Figure 2).

The type of leading symptom also differed according to country of birth ($\chi^2=8.193$; $df=2$; $p=0.016$), with patients born abroad having a higher incidence of psychotic symptoms than patients born in Belgium (21.3% vs. 8.3%).

Mental health care

After first psychiatric assessment, about 4 out of 5 patients continued to be followed by our psychiatric outpatient program (81.5% ; $n=198$). About one third of patients (37.0%; $n=90$) continued to be followed-up until data extraction, while 21.8% were transferred to AMHS ($n=53$), 19.8 % dropped-out ($n=48$), 17.3% were discharged ($n=42$) and 4.1% ($n=10$) were transferred to CAMHS. Results indicated that patients who were followed-up ($M=18.8$; $SD=2.0$) were slightly older than patients who not followed-up ($M=18.0$; $SD=1.9$) ($t=2.223$; $p=0.027$). The decision to follow-up the patient did not differ according to sex ($\chi^2=2.460$; $df=1$; $p=0.081$) or leading symptom ($\chi^2=4.660$; $df=2$; $p=0.092$) (Table 3).

DISCUSSION

Sociodemographic characteristics

The total sample assessed in this TAY program from October 2019 to May 2021 was composed by 243 youth aged from 16 to 24 years old. Sex ratio was slightly unbalanced in favour of female population (59%). The authors link this sex distribution to the fact that females are often over-represented in help-seeking population (Alonso et al. 2004), especially among youth (Purcell et al. 2015). The mean age, at the time of the first appointment in the TAY program, was 18.7 years, close to the legal barrier between CAMHS and AMHS in Belgium (18 years old ± 3 years). This result is consistent with recent observations about poor access to mental health care at the CAMHS-AMHS interface (McGorry et al. 2013). Our innovative TAY-tailored psychiatric outpatient program probably represented an opportunity for youth and their entourage, who were experiencing some difficulties in obtaining psychiatric assessment and care in Brussels.

The majority of the sample was still enrolled in academic education, including secondary education, higher education or another education activity. Few patients (8%) were involved in working activity, both full- and part-time confounded. The rate of youth enrolment in education is relatively high (77%), similarly to Belgium national rates (OECD 2019). Any differences in sex distribution were found.

In terms of country of birth, the majority of youth were born in Belgium (80%). Relatively high rates of participants born in another country (20%) can be explained by the rich mix of origins in Brussels urban area (StatBel 2021).

Arrival to the TAY program and leading symptom

TAY who consulted in our specific program were referred by general practitioners in 19% of cases and by child and adolescent psychiatrists in 18%. Psychologists also actively participated in referrals (11%). Additionally, 7% of patients were referred from adult psychiatrists. These latter results appear to be a relevant sign of the difficulty for CAMHS to manage transition as well as AMHS to meet all demands for TAY's psychiatric care (McLaren et al. 2013, Singh et al. 2008). Thus, the presented outpatient program for TAY seems helpful for both youth and mental health services in order to allow better accessibility to care (McGorry et al. 2013). Among multiple issues to achieve a good quality transition from CAMHS to AMHS, the lack of educational programs on youth mental health in both child and adult psychiatry trainings is still relevant (Russet et al. 2019). Specific training programs are recently emerging (Macmillan et al. 2021).

In addition, many youth (37%) were not referred by any health care professionals. According to Belgian Health System policies, patients are allowed to spontaneously demand a specialist's assessment, even if the general practitioner's coordination role in care is encouraged (Corens 2007).

The analysis of these different types of access to mental health care enlightened two sub-groups in the clinical population: firstly, youth who are in an actual process of transition from CAMHS to AMHS; secondly, those who arrived to this outpatient program for a psychiatric assessment referred by first-line health care professionals. It is not possible to state if youth belonging to this second sub-group consulted a psychiatrist for the first time. Both sub-groups need a more solid and accessible CAMHS-AMHS interface at the age of transition. Considering that the onset of first psychiatric symptoms happens mainly before the age of 25 (Solmi et al. 2021), it is essential to develop an optimal and rapid access to mental health care system for youth between 16 and 24 years.

Nearly half of the consultation's requests came from youth and, for 39% of cases, from family members. An active involvement of youth in care process is fundamental for both care itself and transition (Singh et al. 2016). On the other hand, parents and families appropriate involvement in care is considered a beneficial feature correlated to better outcomes in transition (Colver et al. 2018, Jivanjee & Kruzich 2011).

Concerning leading symptoms, internalizing symptoms rates (68 %) were higher than the other two types, externalizing (22%) and psychotic (11%). These results are consistent with previous epidemiological studies supporting that internalizing symptoms are frequently the first onset of clinical manifestations (Solmi et al. 2021). However, it is rarer that youth with predominant

externalizing or psychotic symptoms present for care in outpatient services (Martin & Leslie 2003). This kind of leading symptom is usually more frequent in psychiatric emergency units or in inpatient services (Frosch et al. 2011).

We point out that our TAY outpatient program has been active mainly during the COVID-19 pandemic, which is known to have increased internalizing symptoms among adolescents and youth (Nearchou et al. 2020).

In this study, interesting correlations have been found between leading symptoms and youth's sex. Rates of internalizing symptoms were greater in female participants compared to male; whereas young men were more frequently led to psychiatric care for externalizing and psychotic symptoms than women, which is in correlation with literature (Genuchi & Mitsunaga 2015; Spauwen et al. 2003).

Age at the time of first assessment was positively correlated to the type of leading symptom. Young patients with psychotic symptoms were found to be significantly older than the other ones. This result could be explained by two different but coexisting possible hypothesis. First, part of internalizing or externalizing symptoms might also be related to psychosis. It has been proved that clinical manifestation of psychosis at early stages could be non-specific. Häfner et al. (2013) demonstrated the presence of anxiety (18%) or depressive mood (16%) before the appearance of typical psychotic symptoms. Even theories describing basic symptoms (Schultze-Lutter et al. 2012) and prodromal ones (Miller et al. 2003) present overlapping clinical manifestations with internalizing or externalizing dimensions of symptoms, for example: irritability, social withdrawal, lack of energy, stress intolerance and cannabis misuse. This clinical background, combined with epidemiologic outbreak of psychotic symptoms (Solmi et al. 2021), would suggest that a portion of TAY presenting to psychiatric assessment with internalizing and externalizing symptoms could be in a potential early stage of psychosis. In parallel, negative psychotic symptoms such as self-social isolation, anhedonia or cognitive impairment, could have been defined as internalizing ones during the first psychiatric assessment, especially if not accompanied by positive psychotic symptoms (Stahl & Buckley 2007). Thus, it is important to focus on youth mental health with a trans-diagnostic approach in order to better understand and treat psychopathology in TAY with positive long-term outcomes (McGorry et al. 2018).

The percentage of psychotic symptoms revealed to be significantly greater in youth born in a country other than Belgium. This finding reinforces that migration plays a role in the emergence of psychotic disorders, particularly for migrants in Europe from developing countries outside this continent (Selten et al. 2019).

Mental health care

A short to medium-term follow-up in our psychiatric outpatient program was proposed to the majority of the patients (82%). Among these patients, half of them were still followed-up when research assistants collected and analyzed data. This result reinforces the importance of time dedicated to psychiatric assessment in TAY: complete evaluation of symptoms, social and familial functioning, and potential care need. Enough time should be spent to define a collaborative program for care. It is crucial to ensure youth and entourage involvement (Colver et al. 2018, Singh et al. 2016). Considering that CAMHS-AMHS interface remains weak, finding an appropriate service that could offer TAY-tailored care also requires additional time. Thus, continuity of care could represent an actual challenge for clinicians (Islam et al. 2016). For these reasons, specific clinical programs for TAY appear to be fundamental in mental health services.

After a first psychiatric assessment and, possibly, a period of follow-up, medical orientation to other services could be proposed. These medical orientations were mainly towards AMHS care (22%). Orientation to CAMHS care was infrequent (4%) and occurred rapidly after the first assessment. A great portion of youth (20%) dropped-out the outpatient psychiatric program before that a care pathway could be established.

Within the program, clinicians tended to follow-up TAY until the moment when transition to AMHS care was possible. Considering that this process could be long and discouraging, it is not surprising that many drop-outs from the follow-up occurred.

After the initial evaluation, for almost 1 patient out of 10, there was no need to continue any medical care. Another consistent part of youth (9.5%) were also discharged from any type of medical care after a short to medium term follow-up period in the program. In total 17% of youth did not need to be oriented to medical care and almost half of them were discharged after the psychiatric assessment. These findings point out the importance of a good quality psychiatric assessment and care proposal when psychopathology does not fulfill DSM criteria (Caspi & Moffitt 2018).

In psychiatry, time has come to conceive clinical staging, in order to propose appropriate treatment and intervene on increasing psychopathology (McGorry et al. 2018). Strong evidences are recently supporting the role of psychiatric assessment and care on early stages of every psychiatric disorder in a trans-diagnostic approach. This could lead to plan stage-specific clinical interventions and tend to reduce psychiatric burden in adulthood (Iorfino et al. 2019).

The decision to follow-up patients in TAY program was not influenced neither by sex nor by the type of leading symptoms. However, the patient who were proposed to be followed up were older than the ones who

did not received this proposal. Different variables, such as family and personal history of psychiatric disorders, past and actual medical treatment, non-medical care, should be analyzed. Further studies should also explore the role of these factors in the medical orientation process for TAY to construct clear recommendations about the management of psychiatric assessment and care.

CONCLUSION

The implementation of clinical programs specifically designed for youth as well as training programs for psychiatry trainees seems the best option to target and improve youth mental health, with positive long-term outcomes in adulthood and, in extent, increase the quality and efficacy in psychiatric interventions in our society.

This retrospective study, analyzing care trajectories in a new outpatient psychiatric program for TAY, enlighten the importance to enhance clinical expertise in youth mental health. Classical boundaries, determined by artificial variables such as age or type of psychopathology, do not seem to be efficient criteria to achieve a good quality psychiatric evaluation and continuity of care in TAY. Further steps in both clinical and research fields should focus on concrete proposals to strengthen the CAMHS-AMHS interface.

Acknowledgements:

The study was carried out as part of the University Chair "Psychiatry in Transition in a World in Transition" (Université Libre de Bruxelles - ULB) with the support of Julie Renson Fund, the Queen Fabiola Fund and the King Baudouin Foundation.

Conflict of interest: None to declare.

Contribution of individual authors:

Simone Marchini: conceptualization and design, interpretation of the findings, draft preparation, editing.

Joana Reis: conceptualization and design, statistical analyses, interpretation of the findings, draft preparation, editing.

Iman Hussein: conceptualization and design, draft preparation.

Véronique Delvenne: conceptualization and design, revision.

All authors have read and agreed to the published version of the manuscript.

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