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ORIGINAL CONTRIBUTION

Child and adolescent psychiatry training and mental health care in Southeast Europe

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Abstract
There is very limited information available on child and adolescent psychiatry (CAP) training in the Southeast European (SEE) region. The objective of this study was to fill in this gap by presenting descriptive data on CAP training and national mental health services for children and adolescent in 11 SEE countries. On the initiative of World Psychiatric Association—CAP section, national CAP association boards from each SEE country allocated one member to the Consortium on Academic Child and Adolescent Psychiatry in SEE (CACAP SEE) in 2018. Using an internally distributed questionnaire, CACAP SEE members provided information on the CAP training structure and mental health care. Ten out of eleven SEE countries recognized CAP as a separate specialty. Duration of training did not differ much between the SEE countries. Other components were more variable (availability of rotations, overseas electives, and inclusion of psychotherapy). Ten countries were familiar with the CAP requirements of the European Union of Medical Specialists (UEMS–CAP) and five provided the training in accordance with it. Nine countries had less than 36 board-certified child and adolescent psychiatrists practicing in the country. The number of general psychiatrists treating children and adolescents with mental disorders was higher than the number of CAP specialists in five of the countries. Although CAP was recognized as a separate specialty in the vast majority of SEE countries, there was a substantial variation among them in available CAP training. In most of the countries, there is a considerable lack of CAP specialists for several reasons, including loss of trained specialists to other countries.

Keywords Child · Adolescent · Psychiatry · Training · European Union of Medical Specialists (UEMS)

Introduction

The medical specialty of child and adolescent psychiatry (CAP) is relatively new compared to other medical specialties. As a result, the recognition of the specialty varies through different European countries. The standard of the implemented CAP care is rooted in the differentiating CAP postgraduate training systems in place in each region or country. In Europe, CAP training systems and the integrated programs differ substantially between the countries, particularly in regards to the structure, organization, content, and duration of the programs [1–3]. The European Union of Medical Specialists—Child and Adolescent Psychiatry (UEMS–CAP) [4], the European Society of Child and Adolescent Psychiatry (ESCAP) [5], and the European Federation of Psychiatric Trainees (EFPT) [6]—have all made efforts towards coordinating CAP training throughout Europe; however, most recommendations have not yet been universally accepted [2, 3]. UEMS–CAP produced both a training requirement manual and a logbook to serve as comprehensive recommendations for CAP training, both of which promote the implementation of UEMS–CAP minimal training standards to standardize CAP training across Europe. UEMS–CAP requirements recommend a minimum duration of training in CAP itself of 3 years and additional time for adult psychiatry and/or pediatrics and/or neurology. Furthermore, the majority of CAP training should ideally be carried out in outpatient and community settings [7].

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Table 1 General information on SEE countries (number of inhabitants—last population census, membership in EU and UEMS–CAP, GDP) [23, 24]

Country	Number of inhabitants	Number of young people under 19 years	Member of EU	Member of UEMS–CAP	GDP per capita in USD	GDP in billion USD
Albania	2.870.324	700.615	N	N	4.537,86	13,04
Bosnia and Herzegovina[a]	3.515.982	1.250.000	N	N	5.180,64	18,17
Bulgaria	7.050.034	1.022.254 (0–14 years)	Y, since 2007	Y	8.031,60	56,83
Croatia	4.105.493	780.00	Y, since 2013	N	13.294,51	54,85
FYR of Macedonia	2.075.301	445.710	N	N	5.442,61	11,34
Greece	10.738.868	1.664.000 (0–15 years)	Y, since1981	Y	18.613,42	200,3
Kosovo[b]	1.831.000	580.390	N	N	3.893,97	7129
Montenegro	622.359	154.255	N	N	7.669,57	4,774
Romania	19.523.621	4.443.588	Y, since 2007	N	10.813,72	211,8
Serbia	7.001.444	1.218.906 (0–17 years)	N	N	5.900,04	41,43
Slovenia	2.066.880	403.000	Y, since 2004	Y	23.597,29	48,77

Y Yes, *N* No, *NR* not reported, *N/A* not applicable, *GDP* gross domestic product

*Bosnia & Herzegovina is defined by two separate entities, Republika Srbska and the Federation of Bosnia-Herzegovina. All data provided are inclusive and representative of both

[b]Name Kosovo is used in accordance with the UN Security Council Resolution 1244 (1999)

While the requirements for CAP training of UEMS–CAP are clear, research to assess the current status of CAP systems and barriers to standardize CAP training across Europe is still limited. In 1999, Remschmidt et al. published a book about CAP development in 31 European countries including the section of CAP training [8]. Later, three studies have been conducted to focus exclusively on the status of CAP training in Europe. In 2006, Karabekiroglu and colleagues investigated CAP training in 34 European countries, discovering large differences in the structure of CAP training programs and subsequently calling for improved harmonization of CAP training across Europe [2]. In 2010, Simmons and colleagues surveyed CAP trainees in 28 European countries and found that the CAP postgraduate training standards in place, along with the trainees' training experiences, varied extensively across Europe [1]. In 2016, the study of Barrett and colleagues collected information from 31 European countries and focused on all aspects of CAP training [3]. It showed some progress towards harmonization of CAP training in Europe compared to the study of Karabekiroglu; however, a substantial diversity remained in the length of the training and the scope of topics taught both theoretically and in skills [3].

While these findings are informative and build upon the evidence-based knowledge surrounding CAP in Europe, they allow only a comparison for the field of CAP, which has historically evolved differently not only in each country but even within the regions of a particular country. It can be assumed that these historically different roots contributed to the observed variations in CAP training. There were calls for a study which would not focus solely on CAP training, but would attempt to provide an overview of the national mental health services for children and adolescents to better enable cross-country comparisons and to provide contextual framework for differences in CAP training [3].

The Southeast Europe (SEE) countries including Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Greece, Former Yugoslav Republic (FYR) of Macedonia, Montenegro, Serbia, Slovenia, Romania, and Kosovo*,[1] have been neglected to some extent by the previous CAP training studies [1–3]. The 2010 study by Simmons included only five of the eleven SEE countries [1]; the 2016 study by Barrett included all SEE countries except Kosovo. While this could be explained by the fact that only three SEE countries belong to UEMS–CAP (see Table 1), CAP research in SEE is still lagging behind other parts of Europe. As a means to compensate, smaller regional and national studies have tried to fill the research gap, yet these studies primarily analyzed the overall situation of CAP, giving little attention to the specifics of academic CAP and the associated training programs [9–12]. One of these, conducted by Pejovic-Milovancevic and colleagues in 2014, examined CAP in Bosnia

[1] *Kosovo is used in accordance with UN Security Council Resolution 1244 (1999).

and Herzegovina, Bulgaria, Greece, FYR of Macedonia, Montenegro, Serbia, and Romania. All included countries, except Greece, reported not only to have a limited number of both CAP specialists and allied professionals available, but also an overall lack of specialized CAP training programs in place [9]. In addition, brief reports produced in Croatia and Slovenia have discovered that a considerable number of general psychiatrists are treating children and adolescents with mental disorders without having the proper credentials to practice as CAP specialists [10–12]. Beyond these studies, however, very little has been published on CAP training and mental health care in place throughout the SEE region.

When investigating CAP in the SEE region, it is important to remember that there are significant differences among SEE countries (general information in Table 1). While all countries in SEE, except for Greece, are new democracies with transitioning health care systems, there is a considerable variation among the established medical systems, policies, and political systems in place. Furthermore, each country's traditions, history, culture, religion, and spoken and written language, contribute to the region's diversity. Historically, before World War I (WWI), Croatia and Slovenia were part of the Austro-Hungarian Empire for nearly 600 years, while Albania, Bulgaria, Bosnia and Herzegovina, FYR of Macedonia, Montenegro, Serbia, and Romania were all part of the Ottoman Empire. From the end of WWII, up to the beginning of the 1990s, six of the SEE countries formed Yugoslavia (Bosnia and Herzegovina, Croatia, FYR of Macedonia, Montenegro, Serbia, and Slovenia). Today, Bosnia and Herzegovina encompasses two political entities, the Federation of Bosnia and Herzegovina and Republika Srbska.

With limited evidence-based information currently available on CAP training and mental health care for children and adolescents throughout SEE, the aim of the present study was to fill the gap and to collect, analyze, and present descriptive data on the structure, organization, content, and duration of the current CAP training programs in place and on the mental health care for children and adolescents in SEE countries.

Methods

The initiative to collect data on CAP training in SEE countries came from the World Psychiatry Association (WPA)—CAP section that has already initiated two studies on CAP training in Far East [13, 14]. The aim was to gather up-to-date information on CAP training in SEE countries as well. The questionnaire used in the present study was adapted following the questionnaire for the Far East. Seven questions were added (question 16–22) to meet challenges and specific situations in SEE. The questionnaire was first drafted as a word document and piloted in two countries for suitability and clarity (Slovenia, Serbia) prior to being made accessible online. The questionnaire was composed in English and included a total of 22 questions (Appendix i).

National CAP association boards from each SEE country were addressed via email to allocate one leading academic child and adolescent psychiatrist who is familiar with national CAP training and/or is an active trainer to the CACAP SEE. Therefore, the CACAP SEE consisted of one CAP representative from each SEE country, all of whom are affiliated with academic universities and/or clinical departments. The CACAP SEE members were from Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Greece, FYR of Macedonia, Montenegro, Romania, Serbia, Slovenia, and Kosovo*. The information provided on behalf of Bosnia and Herzegovina was representative of the two separate entities within the country (Republika Srbska and the Federation of Bosnia and Herzegovina), to ensure a valid and reliable representation of the country's CAP system. Using an internally distributed questionnaire, CACAP SEE members provided information on current CAP training over an 8 week period (March–April 2018). All CACPA SEE members were instructed to check national CAP curricula and to consult colleagues, trainers, trainees, and governmental representative to provide reliable data. All information collected was initially organized into an Excel worksheet and sent back to CACAP SEE members to review all data provided in December 2018. Each CACAP SEE member was responsible for accuracy of the data on their own country.

No formal clearance was needed from an official ethics committee to conduct this study, as there was no collection of personal health data or biological material. All information collected was generally publicly available knowledge, accessible to professionals within the field, including the CACAP SEE members who contributed to this study.

Results

CAP as a separate specialty and other CAP attributes

As shown in Table 2, all countries except for Bosnia and Herzegovina recognized CAP as a separate specialty and provided a specialized CAP postgraduate training program. While the country of Bosnia and Herzegovina as a whole did not recognize CAP as a separate specialty, Republika Srbska of Bosnia and Herzegovina have recognized CAP as a separate specialty since 2015. The official year that CAP was acknowledged as an independent medical specialty ranged from 1981 (Greece) to 2015 (FYR of Macedonia). A majority (9/11) of the countries had a national CAP society, with Albania and Montenegro being the only countries without. A national CAP society was established in the majority of

Table 2 Data on CAP specialty, number of CAP specialists and general psychiatrists, national mental health policy, CAP society, and journal

Country	CAP recognized as separate specialty with post-graduate training curriculum	CAP established as a separate medical specialty (year)	Number of board-certified CAP specialists	Number of CAP specialists per 100,000 young people (aged 0–19)	Number of board-certified general psychiatrists	Number of general psychiatrists treating youth	National child and adolescent mental health policy	CAP society	Established specialty society (year)	National CAP journal
Albania	Y	2003	12	1.7	112	10–14	N	N	N/A	N
Bosnia and Herzegovina[a]	N	2015[b]	10[b]	0.8b	~450	35	Y	Y	2011	N
Bulgaria	Y	1997	25	2.4	NR	NR	N	Y	1993	N
Croatia	Y	2011	35	4.4	600	10–20	Y	Y	1991	N
FYR of Macedonia	Y	2015	6	1.3	~200	~20	Y	Y	2005	N
Greece	Y	1981	350	21	1600	0	Y	Y	1983	Y
Kosovo[d]	Y	2008	6	1	50	50	N	Y	1993	N
Montenegro	Y	1990	0	0	52	All[c]	Y	N	N/A	N
Romania	Y	Early 1990s	200	4.5	500	0	Y	Y	1990	Y
Serbia	Y	1995	24	1.9	972	22	N	Y	1986	N
Slovenia	Y	2000	30	7.4	100	10	Y	Y	1996	N

Y Yes, *N* No, *NR* not reported, *N/A* not applicable, *CAP* Child and Adolescent Psychiatry

[a]Bosnia & Herzegovina is defined by two separate entities, Republika Srbska and the Federation of Bosnia–Herzegovina. All data provided are inclusive and representative of both

[b]Bosnia & Herzegovina data representative of Republika Srbska

[c]All psychiatrists treat both the child and adolescent populations, but only one psychiatrist treats the child population officially

[d]Name Kosovo is used in accordance with UN Security Council Resolution 1244 (1999)

Table 3 Data on general characteristics of CAP training

Country	Familiarity of UEMS–CAP requirements for CAP training	CAP training in accordance with UEMS–CAP requirements	Required to complete general psychiatry prior to CAP	Duration of CAP training	Duration of CAP training spent in field of CAP	Duration of CAP training spent in other specialties	Available overseas CAP electives (location)	Systematic integration of psychotherapy in CAP training
Albania	Y	Y	N	4 years	2.5 years	1.5 years	N	N
Bosnia and Herzegovina[a]	N	N/A	N/A	5 years[b]	3 years[b]	2 years[b]	N	N
Bulgaria	Y	Partially	N	4 years	2 years	2 years	N	N
Croatia	Y	N	N	5 years	3.5 years	1.5 years	N	N
FYR of Macedonia	Y	Y	N	5 years	3 years	2 years	Y (TR, SRB, SI, DE)	Y
Greece	Y	Y	N	5 years	3.5 years	1.5 years	Y (EU, USA, CA)	Y
Kosovo[c]	Y	Partially	N	5 years	3 years	2 years	N	Y
Montenegro	Y	N	N	4 years	2 years	NR	N	Y
Romania	Y	Y	N	5 years	3.5 years	1.5 years	N	Y
Serbia	Y	N	N	4 years	2 years	2 years	N	N
Slovenia	Y	Y	N	5 years	3 years	2 year	Y	N

Y Yes, *N* No, *NR* not reported, *N/A* not applicable, *CAP* Child and Adolescent Psychiatry, *EU* European Union, *USA* United States of America, *CA* Canada, *TR* Turkey, *SRB* Serbia, *SI* Slovenia, *DE* Germany

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countries (7/11) prior to or during the year 2000. Bulgaria, Serbia, Albania, and Kosovo* were the only countries without a national child and adolescent mental health policy in place, while Romania and Greece were the only countries who reported having a national CAP journal [15, 16]. The number of board-certified child and adolescent psychiatrists practicing in the country ranged from 0 (Montenegro) to 350 (Greece). The number of CAP specialists per 100,000 young people under 19 varied widely, with six countries having less than two CAP specialists per 100,000 young people. At the time of data collection, all countries except Greece and Romania had less than 36 board-certified child and adolescent psychiatrists practicing in the country.

General characteristics of CAP training

As presented in Table 3, of the ten countries that reported to be familiar with UEMS–CAP requirements for CAP training, five provided training in accordance with them (Slovenia, Albania, Greece, Macedonia and Romania), two reported the requirements were partially followed (Bulgaria, Kosovo*), and three (Serbia, Croatia and Montenegro) did not follow them. The duration of the whole CAP training was either 4 years (Bulgaria, Serbia, Montenegro, Albania) or 5 years (Bosnia and Herzegovina, Croatia, Slovenia, Greece, Romania, FYR of Macedonia, and Kosovo*). The duration of the training spent in the CAP field ranged from two years (Bulgaria, Serbia, and Montenegro) to three and a half years (Croatia, Romania, and Greece). The total amount of time spent in other specialties during CAP training ranged from one and a half years to two years. Bulgaria, Bosnia and Herzegovina, Serbia, and FYR of Macedonia and Kosovo* all reported that CAP trainees spent 2 years in other specialties overall. Greece, FYR of Macedonia, and Slovenia were the only countries to provide oversea CAP electives. Trainees from Greece and Slovenia were offered an optional part of the training as part of the European ERASMUS program, whereas the trainees from Greece were also provided with optional training in the USA and Canada through agreements between the respective countries. Trainees from FYR of Macedonia were offered an optional training in Turkey, Serbia, Slovenia, or Germany through agreements between respective countries. No country that had a separate specialized CAP postgraduate training program required the completion of general psychiatry training prior to entering CAP training.

Specific characteristic of CAP training—content

All countries with a separate CAP training program also required placements at the in-patient and outpatient CAP units and at pediatric neurology departments. A majority

Table 4 Data on CAP services, needs, and general psychiatry training

Country	Need for more CAP psychiatrists (quantity)	Need for more allied professionals (quantity)	Board certification system in place for CAP specialists	Number of CAP departments affiliated with universities	Post-grad general psychiatry training national curriculum	Duration of general psychiatry training	Mandatory/optional CAP exposure during general psychiatry training (duration)
Albania	Y (50)	Y (250)	Y	1	Y	4 years	Y (9 mo.) mandatory
Bosnia and Herzegovina[a]	Y (70)	Y (30)	Y[b]	2	Y	5 years	Y (6 mo.) mandatory
Bulgaria	Y (~40)	Y (30–40)	Y	2	Y	4 years	Y (4 mo.) mandatory
Croatia	Y (83)	Y (400–500)[c]	Y	3	Y	5 years	Y (3 mo.) mandatory
FYR of Macedonia	Y (20)	Y (40)	Y	1	Y	5 years	Y (6 mo.) mandatory
Greece	N	N	Y	2	Y	5 years	Y (3–6 mo.) optional
Kosovo[d]	Y (40)	Y (30–40)	Y	1	Y	5 years	Y (6mo.) mandatory
Montenegro	Y (NR)	Y (NR)	N	1[e]	Y	4 years	Y (6 mo.) mandatory
Romania	Y (NR)	Y (NR)	Y	3	Y	5 years	Y (6 mo.) mandatory
Serbia	Y (80–90)	Y (NR)	Y	3	Y	4 years	Y (3 mo.) mandatory
Slovenia	Y (15)	Y (40)	Y	3	Y	5 years	Y (3 mo.) mandatory

Y Yes, *N* No, *NR* not reported, *N/A* not applicable, *mo*. months, *CAP* Child and Adolescent Psychiatry

[a]Bosnia & Herzegovina is defined by two separate entities, Republika Srbska and the Federation of Bosnia–Herzegovina. All data provided is inclusive and representative of both

[b]Bosnia & Herzegovina data representative of Republika Srbska

[c]Specified allied professionals required: Clinical Psychologists, Social Workers, Educational Specialists, Social Pedagogues, and Occupational Therapists.)

[d]Name Kosovo is used in accordance with the UN Security Council Resolution 1244 (1999)

[e]Affiliation with Medical Faculty in Beograd, Serbia

(8/10) of the countries required consultation−liaison (psychosomatic medicine) placements, while Serbia and Romania did not. In addition, all countries required a general pediatric placement except for Greece and FYR of Macedonia, and eight countries required a forensic psychiatry placement. Half of the countries (5/10) required school consultation rotation, with Bulgaria, Serbia, FYR of Macedonia, Romania, and Kosovo* serving as the exceptions. At the time of data collection, six of the countries did not have a systematic integration of psychotherapy training in the CAP training. All of the countries with a separate CAP postgraduate training program also required the completion of final exam and had a national curriculum in place for the postgraduate CAP training. Psychopharmacology was an important mandatory part of the training in all countries. Both the theory and the skills were taught. There was a mandatory number of hours of the theoretical part (in the majority of the countries, 10 h of lectures and 5 h of seminars) as well as for the practical skills (for example, 3 months of rotation focusing especially on pharmacotherapy or having at least 60 patients treated with medication). In Croatia, the theoretical component was provided by professors of adult psychiatry. Knowledge on pharmacotherapy was tested after completing the specific rotation and at the final exam across all countries.

CAP service, needs, and general psychiatry training

As presented in Table 4, all countries except Greece reported a need for both more child and adolescent psychiatrists, and allied professionals. The shortfall of child and adolescent psychiatrists ranged from 15 (Slovenia) to 90 (Serbia), while the figure for allied professionals ranged from 30 (Bulgaria

and Bosnia and Herzegovina) to 400–500 (Croatia). These numbers were calculated based on the recommendation by the Twinning project in Croatia [17], approved national mental health program in Slovenia [11], and the strategies and plans of the national CAP associations in other countries not yet approved by their respective governments. A majority (7/11) of the countries had less than three academic CAP departments affiliated with universities.

At the time of data collection, the number of qualified (board-certified) general psychiatrists ranged from 50 (Kosovo*) to 1600 (Greece). The number of general psychiatrists treating child and adolescent populations ranged from zero (Romania and Greece) to all of the available general psychiatrists in Montenegro and Kosovo* (Table 2). The reported duration of general psychiatry training was either 4 (four countries) or 5 years (seven countries). All countries reported that they provide a mandatory CAP placement during general psychiatry training, with the duration ranging from 3 months (Serbia, Croatia, Slovenia, Greece) to 9 months (Albania). Greece was the only country that provided an optional CAP placement within general psychiatry training, ranging from 3 to 6 months.

Discussion

CAP as a separate specialty does not reflect in numbers of CAP specialists

One significant result of the study was that CAP was recognized as a separate specialty in the majority (91%) of the SEE countries, compared with only 73% of the responding European countries in the latest study conducted in 31 European countries [3]. However, the CAP recognition was not reflected in the availability of the trained CAP specialists in the SEE region. Actually, the most concerning finding of the present study was the remarkable lack of the CAP specialists in the majority of SEE countries. Even though some SEE countries had recognized CAP as a separate specialty in 1981 (Greece), early 1990s (Montenegro and Romania), 1995 (Serbia), and 1997 (Bulgaria), this recognition was only followed by an increase in the number of board-certified CAP specialists in Greece and Romania. At the time of the study, all SEE countries except Greece and Romania had less than 36 board-certified CAP specialists available. In fact, there were no board-certified CAP specialists available in Montenegro, only six each in FYR of Macedonia and Kosovo*, and merely ten in Republika Srbska of Bosnia and Herzegovina. Presented in numbers of CAP specialists per 100,000 young people under 19, the number was less than 7.4 in nine countries. Furthermore, the number of general psychiatrists treating children and adolescents with mental disorders was higher than the number of CAP specialists in five countries. The general psychiatrists had only 3–6 months exposure to CAP during the 4-or 5-year-long training in all SEE countries, with Albania as an exception with 9 months. The knowledge of CAP acquired over such a short period of time is not broad enough nor in sufficient depth to treat children and adolescents with mental disorders adequately.

Substantial need for more CAP specialists and allied professionals

Although this study collected data only on CAP specialists, all countries except for Greece reported not only a substantial need for more CAP specialists but also for allied professionals. Greece could serve as a good example of good personnel resources and workforce expansion, as it has gained significant numbers of specialists since the recognition of CAP as a separate specialty, ultimately resulting in 350 CAP specialists available. It is noteworthy that the Greek recognition of CAP as a separate specialty in 1981 developed as part of a general reform within the medical education aimed at meeting the EU standards and particularly the UEMS requirements. Following a study of the country's needs, a survey of the necessary programs was scheduled, leading to the choice of specific training centers and the number of trainees to be trained in CAP [18]. During that period, Greece became a full member of the EU and a general transformation of the national health system took place, including a profound reform in the organization of the mental health provision. The aim was to modernize the outdated system of care that was based on an in-patient asylum-like treatment. The Greek mental healthcare system is now largely based on the prevention, community care and limited in-hospital care [18].

Possible reasons for lack of CAP specialists

The lack of the CAP specialists in the majority of the SEE region could be explained in several ways; first, by a loss of specialists to other parts of Europe. CAP trainees and specialists from SEE countries are emigrating to north-western European countries (United Kingdom, Ireland, Sweden, Norway, Germany, Denmark, and Switzerland). For example, according to the official statistics, altogether, 525 medical doctors aged between 24 and 46 have left Croatia since 2013, the year when the county joined the EU, and further 1215 more are preparing to leave [19]. Croatia's national CAP association estimated that about 20% of the CAP specialists have emigrated since 2013. Although many have hoped that the EU accession would provide enough incentives for the people to stay and thrive in Croatia, this accession actually appears to have accelerated emigration. The same has also occurred in Bulgaria [19]. In Bosnia and Herzegovina,

around 300 highly qualified doctors left in 2016 [19]. The number could have been even higher, given the fact that some of them left the country immediately after completing their medical education and have, therefore, never been registered in the official workplace statistics. Media outlets in Bosnia and Herzegovina have calculated that the education of a doctor costs the country approximately €150,000, suggesting that the country spends more than €50 million annually on educating health workers who leave the country [19]. In Kosovo, which has the youngest population in Europe and relatively high birth rate, the population decreased by 122,657 during 2012−2016 due to emigration [20]. According to the available data, the EU profits a great deal from this emigration. Some studies have concluded that immigrants increase GDP by 0.5–1.3%, since doctors emigrate at their most productive age [19]. A second reason for the lack of CAP specialists in the SEE countries could be an inadequate recruitment process. For example, in Croatia and Serbia, one of the reasons for the low recruitment rates is the shortage of financial resources for CAP training. The third reason could be the fact that CAP specialization is not appealing enough to trainees due to the undernourished and poor developed mental health systems of respective countries. For instance, in some SEE countries, the mental health systems lack systematic and comprehensive approaches to child and adolescent mental health care, with very few public places available for CAP specialists to administer care and the provision of lower salaries in comparison to other medical specialties.

Training composition

This study revealed unexpected homogeneity in the training duration. Namely, the differences among the SEE countries in terms of the total duration of time spent both in training (4 or 5 years), and specifically in the field of CAP (two to three and half years) were smaller than expected. In all, 70% of the SEE countries were able to meet the minimum duration of the time recommended by the UEMS–CAP requirements and offered 3 years solely in the field of CAP. When comparing these findings to the study by Barrett [3], only half of the European countries provided more than 3 years in the field of CAP, which suggests that the length of the CAP training itself in the SEE countries is longer than in the majority of the European countries. Furthermore, all SEE countries that had a separate CAP training program in place also had an adequate national curriculum, and in five of the countries, the curriculum was in accordance with the UEMS–CAP training requirements (Albania, Greece, Romania, FYR of Macedonia, and Slovenia). However, looking behind the structure, the performance of the training was more concerning. Croatia, for example, reported training in CAP psychopharmacology is provided by an adult psychiatrists. The prescribing patterns of psychotropic drugs for children and adolescents did not follow international approved indications and off-label prescribing was widespread [21, 22]. The study also revealed a troubling situation regarding the systematic integration of any psychotherapy within the CAP training. Psychotherapy was reported not to be a part of the training in a majority (6/11) of the included countries.

National child and adolescent mental health policy and other CAP attributes

Only seven countries had a national child and adolescent mental health policy in place. For the remaining countries, the child and adolescent mental health approaches taken from other countries could serve as examples of good practice. For example, Slovenia has just recently adopted a national program for mental health and defined areas of mental health care to be prioritized for the period 2018–2028 [12]. The program aims to expand upon the existing workforce with additional staff and to establish 26 new child and adolescent mental health services (CAMHS) throughout Slovenia by the end of 2028, with each CAMHS serving a population of 16,000 youth no older than 19 years of age. A CAMH team will consist of one CAP specialist, four clinical psychologists, one psychologist with special education (different psychotherapeutic schools), two special pedagogues/occupational therapists/social pedagogues, one social worker, medical nurses, and administration staff [12].

It is worthwhile discussing if the establishment of a national CAP society and journal serves as evidence of a mature medical specialty. While only Greece and Romania had a national CAP journal, a majority (9/11) of the countries had a CAP society. Based on these findings and the recognized importance of expanding academic CAP through a national society and journal, we could possibly infer that CAP as a separate specialty is gaining further recognition and establishment among other medical disciplines in the SEE region.

The main limitation of this study was the subjective nature of collecting and presenting information by the members of CACAP SEE. While there was only one representative from each country in CACAP SEE to ensure a reliable data collection and analysis process, all CACAP SEE members informally consulted their colleagues and/or government representatives prior to answering the questionnaire. In addition, although all CACAP SEE members were chosen carefully from their respective national CAP association boards, data on all topics simply were not always accessible. The questions 10 and 11 about the need for more CAP specialists and allied professionals were answered based on different resources. Some countries were able to offer calculated numbers from studies or from the approved national mental health programs, while others were able to offer only the estimated numbers from the strategies and plans of the

national CAP associations, which might be subjective to some extent.

Despite these limitations, however, the present study presents important and up-to-date data on the CAP situation in the SEE region. CACAP SEE recommends the use of the UEMS–CAP training requirements as the framework for all national curricula and more collaboration between the SEE countries particularly in terms of sharing evidence-based knowledge gained from any implementation efforts. Based on the study's findings, the CACAP SEE predicts future work to be necessary to formulate national policies in each SEE country. These policies should provide a basis for systematic and comprehensive approaches to child and adolescent mental health care, with a clear action plan for establishing and enforcing necessary services. One of the key targets not only for the CACAP SEE but also for the governments of the SEE countries and the EU should be to address the lack of CAP specialists properly and also to discuss the problem of loss of doctors through emigration from the SEE countries. To do this, it is essential that methodologically sound data on migration flows are collected, transparently reported, and credible solutions through informed discussion are sought. We hope that the findings of this study can positively influence the recruitment process and expansion of CAP training throughout the SEE region.

Conclusions

This is a broad study focusing not only on CAP training but also on national mental health services, practice, and policy for children and adolescent and on the historical background, allowing to understand better the observed differences in 11 SEE countries. Some unexpected data emerged from this study showing a rather homogenous situation regarding the CAP recognition and the CAP training duration in the SEE countries. However, looking at other components of the CAP training (availability of rotations, overseas electives, inclusion of psychotherapy) and especially at lower numbers of CAP specialists providing help in each SEE country, the situations are worrying and calling for improvement.

Compliance with ethical standards

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

Appendix i

Questionnaire

1. How many qualified (board-certified) general psychiatrists currently practice in your country?
2. How many of the general psychiatrists treat child and adolescent populations?
3. Is there a national curriculum for postgraduate general psychiatry training? Yes/No
4. What is the duration of general psychiatry training?
5. Is there any CAP exposure during general psychiatry training? Yes/No; if yes, please answer question 5(a).
   a. What is the duration of CAP exposure during general psychiatry training?
6. Is child and adolescent psychiatry recognized as a separate specialty (subspecialty)? Yes/No
7. Is there a specialized postgraduate training program in CAP? If YES, please answer 7a-7i. If NO, please skip ahead to question 8.
   a. Is the completion of general psychiatry training required before entering CAP training? Yes/No
   b. Is an in-patient child and adolescent psychiatry unit rotation available for trainees? Yes/No
   c. Is a child and adolescent psychiatry outpatient rotation available for trainees? Yes/No
   d. Is a consultation-Liaison (psychosomatic medicine) rotation available for CAP trainees? Yes/No
   e. Is a pediatric neurology rotation available for CAP trainees? Yes/No
   f. Is a general pediatric rotation available for CAP trainees? Yes/No
   g. Is a school consultation rotation available for CAP trainees? Yes/No
   h. Is a forensic training rotation available for CAP trainees? Yes/No
   i. Are there exit exams in CAP training? Yes/No
8. Is there a national curriculum for postgraduate CAP training? Yes/No
9. Are overseas CAP electives available for CAP trainees? Yes/No
   a. If YES to Question 9, in which countries are these electives available?
10. Is there a need for more child and adolescent psychiatrists in your country? Yes/No
    a. If you answered YES to question 10, what are the estimated numbers of required child and adolescent psychiatrists in your country?
11. Is there a need for more allied professionals, other than child and adolescent psychiatrists? Yes/No

a. If YES to question 11, what is the estimated number of required allied professionals, other than child and adolescent psychiatrists?

12. Is there a board certification system for child and adolescent psychiatrists?
13. How many qualified (board-certified) child and adolescent psychiatrists practice in your country?
14. How many CAP departments affiliated with universities operate in your country?
15. Is there a CAP society? Yes/No
16. Is there a national CAP journal? Yes/No
17. Is there a national child and adolescent mental health policy? Yes/No
18. If CAP is an independent medical specialty, when did this begin?
19. If a Specialist Society exists, when did this begin?
20. How long is CAP training in total?

a. Of this CAP training time, what is the duration spent in the field of child and adolescent psychiatry?
b. How much time does a CAP trainee spend in total in other specialties (general psychiatry, child neurology, paediatrics, etc.)?

21. Are you familiar with UEMS-CAP requirements regarding CAP training? Yes/No

a. If YES to question 21, is the training in your country in accordance with UEMS-CAP requirements? Yes/No

22. Is there systematic integration of psychotherapy training during CAP training? Yes/No

References

1. Simmons M, Barrett E, Wilkinson P, Pacherova L (2012) Trainee experiences of Child and Adolescent Psychiatry (CAP) training in Europe: 2010-2011 survey of the European Survey of the European Federation of Psychiatric Trainees (EFPT) CAP working group. Eur Child Adolesc Psychiatry 21(8):433–442. https://doi.org/10.1007/s00787-012-0275-8
2. Karabekiroglu K, Doğang B, Herguener S, Salis T, Rothenberger A (2006) Child and adolescent psychiatry training in Europe: differences and challenges in harmonization. Eur Child Adolesc Psychiatry 5:467–475
3. Barrett E, Jacobs B, Klasen H, Hergunner S, Hebebrand J. The child and adolescent psychiatry—study of training in Europe (CAP–STATE). Submitted
4. UEMS – CAP Web site: https://uemscap.eu. Accessed 4 Jan 2019
5. ESCAP Web site: https://www.escap.eu. Accessed 4 Jan 2019
6. EFPT Web site: https://www.efpt.eu. Accessed 4 Jan 2019
7. UEMS-CAP and B. Jacobs. Training Requirements for the Specialty of Child and Adolescent Psychiatry. 2014; Available from: http://www.uemscap.eu/uploads/44/Training-Requirement-for-Child-adolescent-Psychiatry-approved_by_UEMS_Council_April_2014-pdf. Accessed 8 Jan 2019
8. Remschmidt H, van Engeland H (1999) In: Remschmidt H, van Engeland H(eds) Child and adolescent psychiatry in Europe: historical development, current situation, future perspectives. Springer-Verlag, Berlin. ISBN 10: 3798511705 ISBN 13: 9783798511705
9. Pejovic-Milovancevic M, Miletic V, Anagnostopoulos D, Raleva M, Stancheva V, Burgic-Radmanovic M, Barac-Otasevic Z, Ispanovic V (2014) Management in child and adolescent psychiatry: How does it look in the Balkans? Psychiatriki 25(1):48–54
10. Boricevic Marsanic V, Dodig Curkovic K, Franic T (2016) The first Croatia congress on children and adolescents mental health: mental health of children and adolescents—an imperative for the future. WPA, Child Adolesc Psychiatry Section's Off J 11:23–24
11. Drobnic Radobuljac M (2016) The state of child and adolescent psychiatry in Slovenia: a brief report. Eur Child Adolesc psychiatry 25:563–565
12. Gregoric Kumperscak H (2018) Child and adolescent psychiatry in Slovenia in comparison with other European countries. Eur Child Adolesc Psychiatry https://doi.org/10.1007/s00787-018-1232-y
13. Tomoya H, Guerrero A, Sartorius N, Fung D, Leventhal B, Ong SH, Kaneko H, Kim B, Cho SC, Skokauskas N (2015) Child and adolescent psychiatry in the far east. Psychiatry Clin Neurosci 69:171–177
14. Hirota T, Guerrero A, Sartorius N, Fung D, Leventhal B, Ong SH, Kaneko H, Apinuntavech S, Bennett A, Bhoomikumar J, Cheon KA, Davaasuren O, Gau S, Hall B, Koren E, van Nguyen T, Oo T, Tan S, Tateno M, Thikeo M, Wiguna T, Wong M, Zheng Y, Skokauskas N (2018) Child and Adolescent Psychiatry in the Far East; a 5-year follow up on the consortium on academic child and adolescent psychiatry in the far east (CACAP-FE) study. Psychiatry Clin Neurosci. 2018. https://doi.org/10.1111/pcn.12800 (**Epub ahead of print**)
15. Romanian Journal of child and adolescent psychiatry Web site:https://www.childandadolescentpsychiatry.ro/romanian-journal/. Accessed 4 Jan 2019
16. Journal of Hellenic child and adolescent psychiatry Web site: https://www.hscap.gr/neo-teyxos. Accessed 4 Jan 2019
17. Stimac D, Koetsier H, Pavic Simetin I, Petrea I (2017) Ensuring optimal health care for people with mental health disorders. Eu J of Pub Health: 27 (3). https://doi.org/10.1093/eurpub/ckx189.202
18. Christodoulou G, Ploumpidis D, Christodoulou N, Anagnostopoulos D (2010) Mental health profile of Greece. Int Psychiatry 7(3):64–67. https://doi.org/10.1192/S1749367600005877
19. European council on foreign relations. Alja Vracic (2018) The way back: brain drain and prosperity in the Western Balkans. https://www.ecfr.eu/publications/summary/the_way_back_brain_drain_and_prosperity_in_the_western_balkans.. Accessed 4 Jan 2019
20. Kosovo Ministry of Internal Affairs, "Migration Profile 2016". http://mpb.rks-gov.net/. Accessed 4 Jan 2019
21. Boričević Maršanić V, Aukst Margetić B, Margetić B (2012) Outpatient treatment of children and adolescents with antidepressants in Croatia. Int J Psychiatry Clin Practice 16(3):214–222
22. Boričević Maršanić V, Dodig-Ćurković K, Juretić Z (2012) Outpatient treatment of children and adolescents with antipsychotic drugs in Croatia. Nord J Psychiatry 66(1):2–7
23. Key figures on Europe 2017 edition—European Commission. Publications office of the European Union, Luxembourg. https://ec.europa.eu/eurostat/statistics-explained
24. World bank data. Web site: https://data.worldbank.org/indicator/NY.GDP.MKTP.CD. Accessed 4 Jan 2019

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