



Subspecialisation in Postgraduate Psychiatry and Implications for a Resource-Limited Specialised Child and Adolescent Mental Health Service

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The importance of mental health in the overall well-being of individuals is being increasingly recognised around the world. Among all the age categories, adolescents and youth appear to have the highest prevalence of mental health disorders [1]. However, adolescents and youth are the age group with least access to mental health services, probably due to a lack of specialised services catering to the developmental and cultural needs of this group [1]. Women, young and old, also require more specialised mental health services. While affluent countries of the world are well on their way to developing age and need specific services [2], it appears that the developing world is struggling to strike the appropriate balance between general mental health services and subspecialties in psychiatry [3].

Subspecialisation of Psychiatry in the West

Most Western countries have services dedicated to subspecialties in psychiatry. Among these, general adult, community, geriatric, child and adolescent, consultation-liaison, addiction, forensic, intellectual disability, perinatal and psychotherapy subspecialties are fairly established in European countries such as the UK. The field of child and adolescent psychiatry is one of the most prominent branches of psychiatry and many services consider it an essential component of mental health care for a population. In harmony with this concept, several

developed countries such as the UK, the USA and Australia have autonomous or semi-autonomous professional bodies representing child and adolescent psychiatrists. According to the American Academy of Child and Adolescent Psychiatry, there were 8300 child and adolescent psychiatrists in the USA by 2016. Even though this number is large compared to other regions of the world, there is still a significant shortage of child and adolescent psychiatrists in the USA considering the rising mental health issues in children and adolescents.

Sri Lanka and Human Development

Sri Lanka is home to a multi-religious population of 21 million people. The country suffered a three-decade-long war that ended in 2009, ushering in a new era for the Sri Lankans. The peaceful environment in the country facilitated a massive growth of the tourism industry and the country has moved to middle-income status. Sri Lanka is unique among its regional counterparts in terms of standards of human development and is the highest rank country in South Asia in the high human development category, as indicated by the Human Development Index (HDI). HDI is a composite statistical index of life expectancy, education and per capita income made by the United Nations Development Programme. Table 1 shows selected health and development indices for Sri Lanka and other selected South and South East Asian nations.

As shown in Table 1, Sri Lanka has superior human development indices compared to other South Asian countries and some Southeast Asian countries. In comparison to regional counterparts, Sri Lanka does significantly well in areas of maternal mortality, adolescent birth ratio, and percentage of the population with a secondary education.

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Table 1 Health and development indices for Sri Lanka and regional counterparts according to the United Nations Development Programme

Index	Sri Lanka	India	Pakistan	Thailand	Indonesia
Human development category	High	Medium	Medium	High	Medium
Human development index	0.766	0.624	0.550	0.740	0.689
Life expectancy at birth (years)	75.0	68.3	66.4	74.6	69.1
Maternal mortality rate (deaths per 100,000 live births)	30	174	178	20	126
Adolescent birth rate (births per 1000 women ages 15–19)	14.8	24.5	38.7	44.6	49.6
Population with secondary education	80.5%	48.7%	46.1%	43.3%	47.3%
Adult literacy rate	92.6%	72.1%	58.7%	96.7%	93.9%

Availability of Psychiatrists in South Asia

The psychiatrist to population ratio varies significantly between countries and regions of the world. Table 2 shows the ratio of psychiatrists per 100,000 population for selected developed countries in the West, South Asian and South East Asian countries. As Table 2 shows, the ratio of psychiatrists to the population between developing countries in South Asia and the West is beyond comparison. All South Asian and most Southeast Asian countries have limited numbers of psychiatrists. Despite the fact that Sri Lanka stands well above the other South Asian nations in terms of human development, the psychiatrist to population ratio remains comparatively similar to other nations in the region.

Barriers to Developing Local Expertise in Psychiatry

There are several reasons for the lack of specialist doctors in mental health in Sri Lanka. This includes the “brain drain,” which has been a huge problem for many developing nations, as many trained psychiatrists have left the country during the times of war in the past [4]. Between 1997 and 2000, 28% of specialist doctors left the country and moved to developed

Table 2 Psychiatrist to population ratios for selected countries in South Asia, Southeast Asia and the West according to the World Health Organization

Country	Psychiatrists per 100,000 population in 2014	Population in millions
Sri Lanka	0.36	21
India	0.30	1324
Pakistan	0.31	193
Thailand	0.87	69
Indonesia	0.29	261
UK	14.63	66
Australia	9.16	24
USA	12.40	323

countries such as the UK and Australia. Among these specialists, the highest loss of professionals was seen in psychiatry, with 56% of qualified psychiatrists leaving the country from 1997 to 2000 [5, 6]. This migration of professionals was driven by the armed conflict and psychosocial environment of the country in the 1990s, in relation to the better working conditions, educational opportunities for children of professionals and higher salaries in the West [6]. With the war coming to an end in 2009, the migration of psychiatrists from Sri Lanka has slowed down. From 2006 to 2009, the last years of armed conflict, only 13% of newly qualified psychiatrists left the country [7]. With the peaceful environment after 2009, many specialists in psychiatry have returned to the country and this has allowed the establishment of subspecialties such as child and adolescent psychiatry and forensic psychiatry [8].

Another factor that leads to the low number of psychiatrists in Sri Lanka is the low popularity of psychiatry as a career choice among medical undergraduates. A study revealed that only 2% of undergraduates desired psychiatry as a postgraduate pathway, which is far below the rates for undergraduates in the West [9].

Establishment of a Child and Adolescent Psychiatry Speciality in Sri Lanka

Twenty-five percent of the Sri Lankan population is below the age of 14 years. There are about 7.5 million children and adolescents in the country below the age of 18 years. According to Western data, the prevalence of attention deficit hyperactivity disorder is estimated at about 7%, specific learning disorders are estimated at about 5–15%, tic disorders are estimated at about 3% and autism spectrum disorder is estimated at about 1% of the population [10]. Ginige et al. found that there is a prevalence of 13.8% for behavioural and emotional disorders among school children between the ages of 7–11 years in a region in Sri Lanka [11]. In 2009, Perera et al. found that the prevalence of autism among 18–24-month-year-olds in a region in Sri Lanka to be 1.07% [12]. These limited studies show the potential burden of mental health disorders among young Sri Lankans. Furthermore, in the

North of the country, many children experienced war-related trauma in the form of combat, bombing, shelling and witnessing the death of a loved one during the armed conflict. According to a study by Elbert et al., 25% of school children studied met the criteria for post-traumatic stress disorder [13]. Many families from North were internally displaced and this led to massive existential trauma on children. Therefore, there is an additional mental health burden in the post-conflict regions of the country with an increasing need for organized mental health services to address the collective trauma in the war-affected communities [14].

The lack of psychiatrists in a country is a barrier to the development of subspecialties in mental health services. For example, at the end of 2017, Sri Lanka had only six practising child and adolescent psychiatrists. The first board-certified child and adolescent psychiatrist assumed service in the country in 2016 after obtaining advanced training in Australia [8]. There were several practising child and adolescent psychiatrists before that who had been trained in Australia, specifically at the Mindful Centre for Training and Research in Developmental Health, which is jointly managed by the University of Melbourne and Monash University. These psychiatrists used their skills and expertise to develop the field of child and adolescent psychiatry in Sri Lanka and they provided postgraduate supervision to the current board-certified specialists. At present, only four of the nine provinces of Sri Lanka have the services of a child and adolescent psychiatrist.

Postgraduate Training in Psychiatry

The first medical school in Sri Lanka was established by the British in Colombo in 1870. At first, medical graduates who wanted to pursue a career in psychiatry travelled to the UK to obtain psychiatry specialist training. The first MD examinations were held in the country in 1952. However, there were no systemic teaching programmes; the Institute of Postgraduate Medicine was established in 1976 to fulfil this need. In 1980, the current Postgraduate Institute of Medicine obtained full recognition from the government to award postgraduate degrees in medical specialities.

An MBBS graduate in Sri Lanka needs to complete 1 year of internship and another year of post-intern medical and surgical appointment before he or she is eligible to sit for the entrance examination for the postgraduate psychiatry programme. Successful candidates undergo 3 years of training in general adult, forensic, child and adolescent psychiatry in inpatient and outpatient mental health services. After completion of these clinical appointments, they are eligible to sit for the MD in psychiatry examination held by the Postgraduate Institute of Medicine with the participation of foreign examiners from either the UK or Australia. Then the MD graduates are allowed to select their preferred speciality in psychiatry. At

present, only general adult, forensic, geriatric, and child and adolescent specialities are available in the country. A general adult advanced trainee is expected to undergo at least 1 year of local and another year of foreign advanced training. Furthermore, one more year of training is required for subspecialists, making the length of the postgraduate training at least 6 years [8].

Barriers to Developing Subspecialties in Psychiatry

For many decades, the focus of health services and mental health policy developers in Sri Lanka was to encourage the establishment of general psychiatry services to minimize the mental health gap and spread the services of specialists throughout the country [15, 16]. The past armed conflict in the north-eastern parts of the country and the emigration of professionals in the 1980s and 1990s were a major hindrance to the development of the field of psychiatry [8]. The existing psychiatrists in the country were mainly stationed in large tertiary care hospitals in the cities and were overburdened by the workload related to major psychiatric disorders. The inpatient facilities and outpatient services in general hospitals were the core and the focus of mental health care [15, 16]. Almost all general psychiatrists had to cater their services to diverse patient populations that included children, adolescents, the elderly, alleged offenders and substance users. A regional consultant psychiatrist would have been responsible for services to an entire district or province. This meant that the specialist had to be skilled and available to all service users, not only for adults. The number of specialists has slowly risen and it has now become possible to plan for subspecialist services [8].

At present, the only inpatient mental health facilities for children below 12 years are available at the Lady Ridgeway Hospital for Children in Colombo, which is the largest city in the country and the commercial capital. In addition, dedicated inpatient care for adolescents is only available at the National Institute of Mental Health near Colombo. The lack of inpatient facilities for young people has forced even complex presentations that require extensive assessment and management interventions being managed as outpatients. Furthermore, the child and adolescent mental health services in peripheral regions often lack the services of allied health staff members such as psychologists, occupational therapists, speech pathologists and nursing officers, which are in low numbers compared to in the West. In 2017, out of all the MD graduates in psychiatry in Sri Lanka, none choose the speciality of child and adolescent psychiatry as their career pathway. Almost all apart from two chose general adult psychiatry.

A significant majority of the psychiatrists in the country work in the public health system. All the general psychiatrists belong to a common pool and workstations are decided by the

ministry of health according to their seniority in the medical field. The transfer scheme for general psychiatrists in the public health system allows these individuals to change their workplace every 4 years. This is facilitated by the fact that there are a higher number of general psychiatrists compared to subspecialists and replacements are available even for remote areas of the country. This workstation change is helpful as general psychiatrists are able to work closer to their families with their seniority. The lack of a fixed transfer scheme for subspecialists makes the field unpopular among advanced trainees as they fear having to work in remote areas of the country for long periods of time, or even decades.

Foreign advanced training exposure is compulsory for postgraduates. Finding training placements in subspecialties is far more difficult compared to finding training for general adult services. This is probably due to subspecialty positions being allocated for local trainees of the developed countries and the limited availability of positions intended for specialist international medical graduates. Trainees are left to seek training positions abroad by themselves without any guidance from the health services in the country. This difficulty also adds to advanced trainees being reluctant to choose subspecialties such as child and adolescent psychiatry as healthcare providers in cities such as Melbourne, Australia offer fewer subspecialist training slots for foreigners.

Origin of Child Psychiatry and Relevance to the East

The need for specific mental health services for children arose in Europe and North America in the late nineteenth century [17, 18]. The unique presentation of mental health issues in children and the different management needs were recognized in the Western world almost a century ago. Child mental health services in the West originated from four influences: educational psychology, the child guidance movement, and psychoanalysis and children's departments in psychiatric teaching hospitals [17, 18]. Adolf Meyer wrote about mental abnormalities in children and believed in the importance of preventive psychiatry. He recommended in the early twentieth century that psychiatrists specialising in child psychology should be attached to schools. Influenced by Meyer, Healy and Bronner established perhaps the first child guidance clinics in the Western world in 1917 in the USA [18]. Thirty years later, the first child guidance clinic in Sri Lanka commenced services at the Colombo General Hospital [15, 16].

It has been more than a century since the Western world recognised the need for specialised mental health services for children and adolescents. Today, child and adolescent services have developed independently of adult services and these services are considered an essential component of mental health care [19]. Despite the successful implementation of

subspecialties in the West, South Asian nations should not necessarily adopt the same structure. Learning the core principles of management from the West would be useful as many services attempt to provide evidence-based treatment. However, cultural practices, the nature of existing services, cost-effectiveness, and requirements of the population in South Asian countries need to be considered when adapting the Western service structure to establish local services [20–22]. In addition, the local services should be able to provide culturally relevant services to vulnerable populations such as the children who are affected by armed conflicts [23].

Future Directions of Child and Adolescent Psychiatry

Despite the limited number of psychiatrists in South Asian nations, it is essential that there should be multi-disciplinary structured services equipped with child and adolescent psychiatrists and allied child mental health professionals [24]. Such multi-disciplinary teams would provide quality management to young people in need and appropriate guidance to other services making referrals for complex child mental health issues [24].

Telemedicine has been used widely in psychiatric consultations in the West and has been successfully implemented in child psychiatry as well [25, 26]. South Asian governments should consider providing telemedicine and secured work email facilities to overcome the difficulties related to health access, which has been tested and found to be feasible in Sri Lanka [27]. However, telemedicine may not be a suitable model to assess, discuss and treat all patient groups.

Sri Lanka is a small country with a high population density. It is possible to travel from the Northern end to the Southern end within about 10 h. Therefore, if a referral system is well organized and streamlined, children and adolescents with diagnostic dilemmas, treatment resistance, and complex family dynamics could be arranged to be seen by specialised child and adolescent mental health teams functioning in tertiary care hospitals. After psychological formulation, diagnostic clarification and initial management, children and adolescents might be referred back to secondary level hospitals where teams comprising of general psychiatrists and paediatricians are available [15, 16]. It is essential that such a referral system be computerized for higher efficiency. The cost would likely be recovered over the years with better treatment outcomes, as has been shown for chronic disease management in developed countries [28].

In conclusion, the Western world has had established subspecialty services in psychiatry for many decades. It is essential to have specialists in child and adolescent psychiatry to assess, diagnose and provide appropriate mental health care to children and adolescents. Child and adolescent psychiatrists

working in multi-disciplinary teams would provide the best possible care for children. Due to the limited number of specialists in South Asian countries such as Sri Lanka, dedicating new postgraduates for subspecialties has been a challenge. It appears that, until higher numbers of specialists are available, existing services need to be coordinated using modern methods to provide countrywide specialised mental health care to children, adolescents and families.

Compliance with Ethical Standards

This research did not involve any human participants or animals.

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

References

1. Australian Institute of Health and Welfare. Young Australians: Their health and well-being 2007. AIHW, 2007.
2. McGorry P, Bates T, Birchwood M. Designing youth mental health services for the 21st century: examples from Australia, Ireland and the UK. *Br J Psychiatry Suppl.* 2013;54:s30–5. <https://doi.org/10.1192/bjp.bp.112.119214>.
3. Kar SK, Prakash O. Subspecialisation in psychiatry: does it fit with India's need? *Educ Health (Abingdon).* 2015;28(3):218–9. <https://doi.org/10.4103/1357-6283.178607>.
4. Oladeji BD, Gureje O. Brain drain: a challenge to global mental health. *BJPsych Int.* 2016;13(3):61–3. eCollection
5. Adkoli BV. Migration of health workers: perspectives from Bangladesh, India, Nepal, Pakistan and Sri Lanka. In *Regional Health Forum.* 2006;10(1):49–58.
6. Mendis L, Jayawardana J, Preena N Brain drain of specialist doctors from Sri Lanka. In *Proceedings of the South Asian Conference on Postgraduates Medical Education 2005*;82–86.
7. De Silva AP, Liyanage IK, De Silva ST, Jayawardana MB, Liyanage CK, Karunathilake IM. Migration of Sri Lankan medical specialists. *Hum Resour Health.* 2013;11:21. <https://doi.org/10.1186/1478-4491-11-21>.
8. Chandradasa M, Kurupparachchi KALA. Child and youth mental health in post-war Sri Lanka. *BJPsych Int.* 2017;14(2):36–7. eCollection
9. Kurupparachchi KA, de Silva NR. Burden of mental illness and the need for better undergraduate education in psychiatry. *Ceylon Med J.* 2014;59(2):35–8. <https://doi.org/10.4038/cmj.v59i2.7061>.
10. American Psychiatric Association. *Diagnostic and statistical manual of mental disorders (DSM-5®)*. Arlington: American Psychiatric Publishing; 2013.
11. Ginige P, Tennakoon SU, Wijesinghe WH, Liyanage L, Herath PS, Bandara K. Prevalence of behavioural and emotional problems among seven to eleven-year-old children in selected schools in Kandy District, Sri Lanka. *J Affect Disord.* 2014;167:167–70.
12. Perera H, Wijewardena K, Aluthwelage R. Screening of 18–24-month-old children for autism in a semi-urban community in Sri Lanka. *J Trop Pediatr.* 2009;55(6):402–5.
13. Elbert T, Schauer M, Schauer E, Huschka B, Hirth M, Neuner F. Trauma-related impairment in children—a survey in Sri Lankan provinces affected by armed conflict. *Child Abuse Negl.* 2009;33(4):238–46. <https://doi.org/10.1016/j.chiabu.2008.02.008>.
14. Somasundaram D. Collective trauma in the Vanni—a qualitative inquiry into the mental health of the internally displaced due to the civil war in Sri Lanka. *Int J Ment Health Syst.* 2010;4:22. <https://doi.org/10.1186/1752-4458-4-22>.
15. Gambheera H. *Mental health services in Sri Lanka.* New York: Routledge; 2016.
16. Gambheera H. The evolution of psychiatric services in Sri Lanka. *South Asian J Psychiatr.* 2011;2(1):25–7.
17. Schowalter JE. A history of child and adolescent psychiatry in the United States. *Psychiatric Times.* 2003;20(9):43.
18. Wardle CJ. Twentieth-century influences on the development in Britain of services for child and adolescent psychiatry. *Br J Psychiatry.* 1991;159:53–68.
19. Charman S. Mental health services for children and young people: the past, present and future of service development and policy. *Ment Health Rev J.* 2004;9(2):6–14.
20. McClintock K, Moeke-Maxwell T, Mellsop G. Appropriate child and adolescent mental health service (CAMHS): māori Caregiver's perspectives. *Pimatisiwin J Aboriginal Indigenous Community Dent Health.* 2011;9:387–98.
21. Syed EU, Hussein SA, Yousafzai AW. Developing services with limited resources: establishing a CAMHS in Pakistan. *Child Adolesc Mental Health.* 2007;12(3):121–4.
22. Dogra N, Frake C, Bretherton K, Dwivedi K, Sharma I. Training CAMHS professionals in developing countries: an Indian case study. *Child Adolesc Mental Health.* 2005;10(2):74–9.
23. Chandradasa M, Champika L. Psychopathology among war-affected children and lessons from Sri Lanka on culturally relevant management. *J Pediatr Womens Healthcare.* 2018;1(1):1006.
24. Kumar D, Sinha UK, Khanna A, Kar SK. Multidisciplinary approach in child and adolescent depression: experience from a tertiary mental health institution in India. *Open J Psychiatry.* 2013;3(03):8–14.
25. Norman S. The use of telemedicine in psychiatry. *J Psychiatr Ment Health Nurs.* 2006;13(6):771–7.
26. Blackmon LA, Kaak HO, Ransan J. Consumer satisfaction with telemedicine child psychiatry consultation in rural Kentucky. *Psychiatr Serv.* 1997;48(11):1464–6.
27. Chapman K, Arunatileka S. ViduSuwa—electronic distant healing: a patient-centric telemedicine solution in Sri Lanka. *Sri Lanka J Bio-Med Inform.* 2010;1(1):63.
28. Hillestad R, Bigelow J, Bower A, Girosi F, Meili R, Scoville R, et al. Can electronic medical record systems transform health care? Potential health benefits, savings, and costs. *Health Aff.* 2005;24(5):1103–17.