

## A Strategic Proposition for Child and Adolescent Mental Health Services in Low Income Countries

\* Mullick MSI <sup>1</sup>, Giasuddin N A <sup>2</sup>

### Summary

*Around 20% children and adolescents in low income countries have psychiatric disorders that are severe enough to result in substantial distress and social impairment. These countries have severe shortage of resources & professionals and a huge gap exists between need and service provision. Children and adolescents here are subject to a large diversity of conditions like poverty, malnutrition, poor living condition, infectious diseases and illiteracy which may affect their physical and psychological well being. Moreover, the affected children are stigmatised and victim of being unrecognised. On the other hand, these countries have unique strengths like relatively stable traditional society, a high degree of cohesiveness within the family, strong family and neighborhood support, warm teacher-student relationship and 'potential' manpower like parents, teachers, child health worker, primary care physicians, social workers, counselors, traditional healers, religious leaders and volunteers. Active involvements of this manpower are thought to be effective in management of child and adolescent mental health problems.*

*We proposed an alternative model for serving the children and adolescents in low income countries that is feasible, practicable, and possible to initiate and expand. The plan consists of developing a local resource-based non-specialist service, integrated with existing mental health and child & adolescent mental health services, school-based services, services by nongovernmental organizations etc. Possible strategic actions include developing paediatric-psychiatric liaison services, establishing multidisciplinary team, training the 'potential' manpower, involving the community, developing culture-specific and cost-effective treatment protocols etc.*

*Bang J Psychiatry 2010; 24(1) : 33-41*

---

\*1. Prof. Mohammad S I Mullick, Chairman and Professor of Child and Adolescent Psychiatry, Department of Psychiatry, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka. Email: msimullick@gmail.com 2. Dr. Noor Ahmed Giasuddin, Assistant Professor, Department of Psychiatry, Faridpur Medical College & Hospital, Faridpur.

---

### \* For Correspondence

*Date of Submission of the article: 08.03.11*

*Date of acceptance of the article: 12.04.11*

## Introduction

Forty to fifty percent people of South Asia and Sub-Saharan Africa earn less than 1.25 US\$ a day.<sup>1</sup> Life expectancy at birth in South Asia is 64 years and in Sub-Saharan Africa it is 52 years.<sup>2</sup> In these two places, roughly 35-45% of the population is under the age of 18 years. Despite subtle differences in the culture and religious practices, broadly the factors influencing child mental health remain the same in these regions. Here children and adolescents are subject to a large diversity of conditions like poverty, malnutrition, poor living condition, infectious diseases and illiteracy which may affect their physical and psychological well being.

Mental disorders of children and adolescents represent a key area of concern from both demographic and epidemiological perspectives as well as from the burden of disease.<sup>3</sup> Developing countries suffer a growing toll from chronic non-transmissible diseases even though infectious diseases continue to be endemic. The prevalence of physical disease obscures awareness of a mental health burden that weighs no less heavily on their populations.<sup>4</sup>

World-wide up to 20% of children and adolescents suffer from a disabling mental illness.<sup>5</sup> From 4 to 6% children and adolescents are in need of a clinical intervention for an observed significant mental disorder.<sup>6</sup> Kessler et al report that half of all lifetime cases of mental disorders start by age 14.<sup>7</sup> Major depressive disorder (MDD) often has an onset in adolescence and is associated with substantial psychosocial impairment and risk of suicide.<sup>8</sup> World-wide suicide

is the 3rd leading cause of death among adolescents.<sup>6</sup> Conduct disorder related behaviors tend to persist into adolescence and adult life through drug abuse, juvenile delinquency, adult crime, antisocial behavior, marital problems, poor employee relations, unemployment, interpersonal problems, and poor physical health.<sup>9</sup>

The range of disorders seen in children in developing countries is not too different from that in the West, and includes emotional disorders (anxiety, depression, phobias), behavioural disorders (conduct disorders, hyperkinesis), intellectual disorders (mental retardation, specific learning disabilities), and pervasive developmental disorders (autism, Asperger syndrome, etc.). Neuropsychiatric disorders such as epilepsy are also very prominent. Studies have also provided information on risk factors for child mental health and development. These include poverty, malnutrition, urbanisation and social change, political oppression, war and displacement, and child labour.<sup>10</sup>

The lack of attention to the mental health of children and adolescents may lead to mental disorders with lifelong consequences, undermines compliance with health regimens, and reduces the capacity of societies to be safe and productive.<sup>3</sup> United Nations General Assembly adopted the Convention on the Rights of the Child (CRC) in 1989, but there is little correlation between the Conventions ratification and the development of child and adolescent mental health services to support access to care and the elimination of discrimination.<sup>3</sup>

In 2003, a WHO conference on Caring for Children with Mental Disorders identified lack of resources, stigma, lack of transportation, lack of ability to communicate effectively in the patient's native language, lack of public knowledge about mental disorders in children and adolescents etc. as barriers to care.<sup>3</sup> In low income countries lack of transportation and lack of available treatment resources are identified as the most significant barriers to care. Stigma is less important in low income countries (37.5%) than high income countries (80%).<sup>3</sup> In developing countries the potential of having professionals trained in social work, psychology, education and other fields is not utilized for mental health care of children and adolescents because of lack of supplemental training in child mental health and of career development opportunities.<sup>3</sup>

Socioeconomic deprivation, family disruption and psychopathology, early childhood insults (physical and psychosocial), childhood temperamental difficulties, violence and intellectual impairment are all widely recognized risk factors; conversely, sensitive and authoritative parenting, decent educational opportunities, psychological autonomy and good physical health are widely recognized protective factors.<sup>11</sup> Supportive traditional society, high degree of cohesiveness within the family, stable and supportive environment, affirmative learning and teaching experience, parental authority etc. are considered as resilient factors for the child and adolescents. Further, overanxious and overprotective parental attitude, dependent and unexpressive nature and tendency of more internalizing

distress and suffering among the children in general can lead to higher rate of emotional problems and lower rate of conduct problems. The child and adolescent psychiatry services in low income countries are not prioritized rather ignored and neglected. The opportunity of training and education and services in this field are limited due to severe shortage of resources and professionals. Overall, there is a vast gap between need and service provision in the low and middle income countries.

### Materials and Methods

We conducted an online search with the terms 'child and adolescent psychiatry', 'child and adolescent mental health', 'child and adolescent mental health service', 'service development in low income countries', etc. The representative epidemiological studies, review articles along with evidence-based comments and recommendations were analyzed and reviewed.

### Results

Low income countries have very low number of psychiatrists and very few child and adolescent psychiatrists. In consideration of this, we need to choose less resource driven, more specialist worker involved model. The allied professionals have to be trained as well as the 'potential manpower', and included into the workforce.

Analyses revealed the following propositions of child and adolescent mental health services for the low income countries.

### **Program to address child and adolescent mental health in Low income countries**

We like to propose a model of Child and Adolescent Mental Health Services (CAMHS) in a low income country with the following levels of care:

Primary level	It comprises primary health centers and community teams. It is the non-specialist level.
Secondary level	It comprises general hospitals and clinics. It is the non specialist and / or specialist level
Tertiary level	It comprises specialist hospitals and clinics. It is the sub-specialist level.

The proposed service will be based on potential resources. It will be part of National health and mental health service. Some part of it will be provided through school health service, multi-disciplinary approach will be required. We shall need collaboration between health, social & educational agencies and active involvement of private sector. The program will be feasible, local resource based, practicable and possible to initiate and expand.

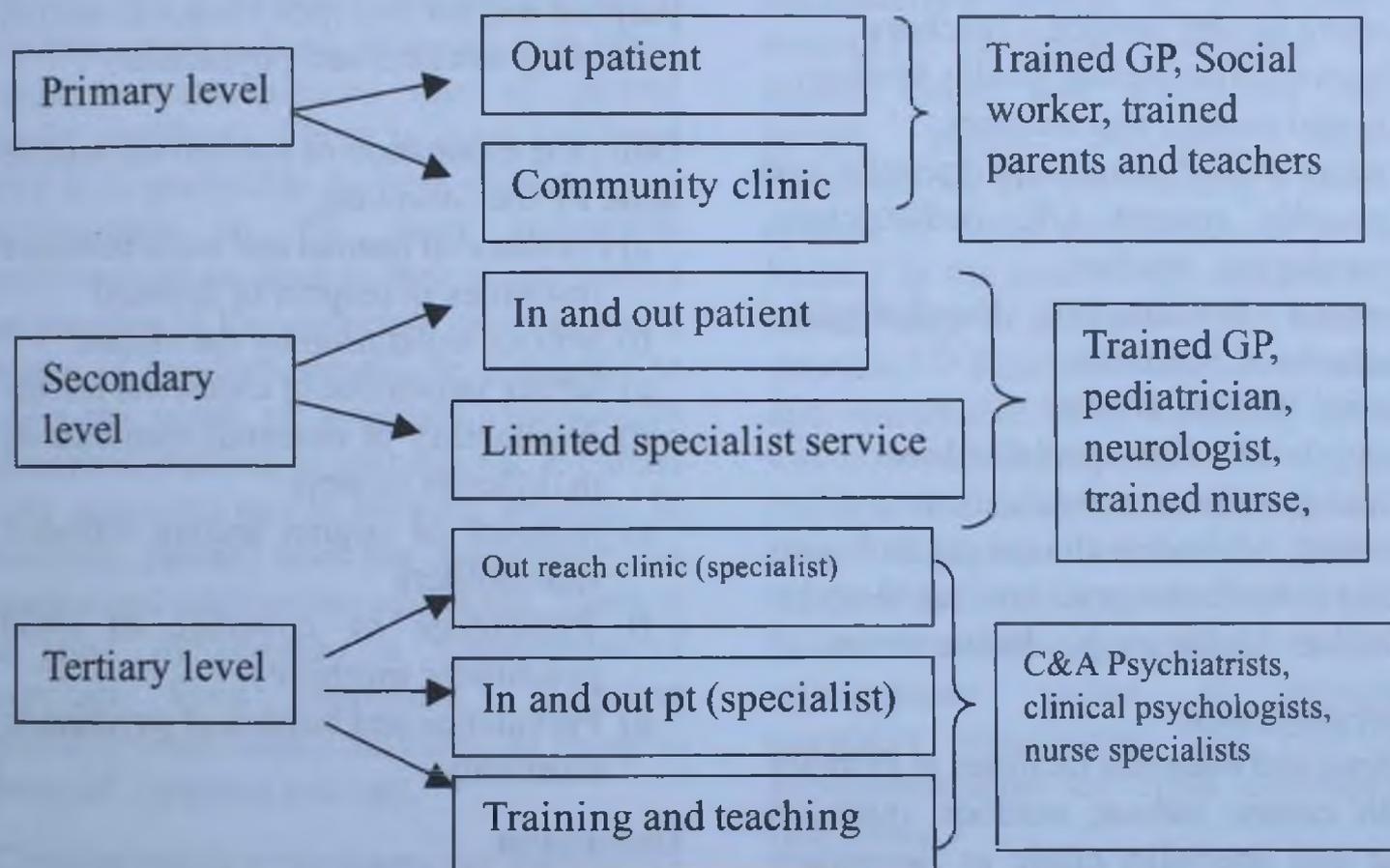
Child and Adolescent Mental Health Services (CAMHS) cannot be developed as a separate service in low income countries as it will not be economically feasible. CAMHS need to be integrated into the existing health services (as well

as existing mental health and child health services). Low income countries have very low number of psychiatrists and very few child and adolescent psychiatrists. We need to train the allied professionals as well as the 'potential manpower' and involve them into the workforce. Low income countries have some advantages in the social system in case of health services. We need to take these into consideration and tackle the shortcomings and take advantage of the positive aspects.

In the primary health care level the proposed service will be delivered to outpatient and community members through non-specialists like general physicians, primary health workers, health counselors (social welfare service), teachers (school health service), trained child mental health worker and trained parents. In the secondary level the care will be delivered to inpatients, special clinic clients, outpatients, community members through non specialist and specialist services like trained GP, pediatricians, neurologists, general psychiatrists, psychologists/behavioral scientists, social welfare worker etc. In the tertiary level the service will be delivered to inpatient, outpatient and specialist clinics through child & adolescent psychiatrists and clinical psychologists, child & adolescent psychiatric social worker, psychiatric nurses with specialization in child and adolescent psychiatry.

For proper implementation of the program the low income countries need the following training courses:

- a) Postgraduate training course for specialized CAMHS
- b) Training of the trainers for offering training and supervision
- c) Short term training on child mental health problems to the “potential” manpower- parents, teachers, child health working staff, GPs, social workers, counselors, volunteers etc.



**Fig: Diagrammatic presentation of proposed model**

The proposed CAMHS policy will have the following criteria

- Specialist-based services
- Non-specialist services
- School based services
- Participation of Non governmental organizations (NGOs)
- Developing pediatrics-psychiatric liaison services
- Governmental initiative and support
- Establishing alternate multidisciplinary team
- Short term training of the potential manpower
- Involvement of the community
- Integrated services
- Developing culture-specific and cost-effective treatment protocol
- Offering coordinated services through health, education & social agencies

Following resources will be required for the service:

*a) Human resources:*

Primary level – Non-specialist level

Primary care service - GPs, Primary health worker

Social Welfare Service - Counselors

School Health Service - Teachers

Trained Child Mental Health Worker

Trained parents and teachers

Secondary level – Non specialist /Specialist level

Specially trained GP, pediatricians, neurologists, teachers

General Psychiatrists, Psychologists/ Behavioral Scientists

Social Welfare Worker

Tertiary level – Sub-specialist level

Child & Adolescent psychiatrists

Child & Adolescent clinical psychologists

Child & Adolescent psychiatric social worker

Child & Adolescent psychiatric nurses

*b) Infrastructure:*

Outdoor and outreach facilities at Primary health center; indoor, outdoor, outreach clinic and specialist clinic in Secondary and tertiary level health care facilities. Transportation for community out reach clinics, school mental health services and home visits will be needed.

**Integration of this program into existing health services**

Integration will be done through utilizing the existing health service by training existing health force, by providing the health workers support from trained specialists in psychiatry & child and adolescent psychiatry.

Out reach clinics will support the local primary care physicians. The primary care physicians will refer patients to the secondary and tertiary centers as required.

Multidisciplinary team will be formed at secondary and tertiary levels who will perform specific duties and will coordinate with other members of health service. We are planning to use existing backbone of health system to minimize the cost increment. We shall need additional monetary support for training purpose and for outreach clinics as well as recruiting workers and physicians.

Outcome evaluation of the service will be done by the following

- a) Presence of human and infra structure resources in respect of demand
- b) Service utilization by the clients
- c) Service satisfaction of clients and parents
- d) Availability of essential medications in different centers
- e) Amount of stigma among different stakeholders
- f) Percentage of coverage of child psychiatric morbidity
- g) Prevalence and burden of psychiatric morbidity

**Discussion**

Recommendations of WHO Atlas 4 include incorporation of child and adolescent mental health issues into all future WHO initiatives, establishing a global child and adolescent mental health action plan within department of mental health and substance dependence of WHO, identifying best practices on the use of pharmacological agents with children and adolescents, and issuing authoritative guidelines on the rational use of psychotropic medication, identifying and disseminating information on examples of model programs demonstrating how countries have increased capacity, utilized existing personnel, instituted re-training programs, improved outcomes etc.

In the developing countries whatever few services are available are mostly based in hospitals or other custodial settings. Community alternatives for care are rare in these countries.<sup>4</sup> Adequate school-based consultation services for child mental health are not employed in either the developing or the developed world. This gap leads to a failure to reach children with school drop-out and other negative consequences due to mental health problems. There is good evidence that it is preferable to treat children and adolescents in the least restrictive environment as close to their communities as possible.<sup>12</sup> This principle requires that a range of services should be available to meet the needs of seriously emotionally disturbed children as outpatients, in partial care programs and in hospital settings. In addition, parents need the opportunity for respite and appropriate education. There is a need to provide a “continuum” of services from outpatient, including possibly home-based services, to those in hospital inpatient settings.

Creative training programs for previously trained pediatricians and adult psychiatrists as well as basic child mental health training for primary care workers, religious personnel, school personnel, and community workers are needed. Specialized training in the diagnosis and treatment of child and adolescent mental disorders for non-specialist nurses has been demonstrated to have a major impact in developing countries.<sup>3</sup>

Child psychiatric skills and expertise cannot be restricted to sparse centers at a secondary or tertiary level. The specialist with child psychiatric skills may have to spend a substantial amount of time providing leadership and training for the

development of community-based resources for child mental health. Child psychiatry can also contribute to changes in social policy about children.<sup>3</sup> Principles for child and adolescent mental health services should include a rights-based approach to care that provides the opportunity for the most marginalized people to participate in society,<sup>14</sup> increasing awareness about infant, child, and adolescent mental health, proper parenting, ensuring education for all, establishing a balanced system of child mental health services located in the community and offering a broad range of diagnostic and treatment services.<sup>3,15</sup> Resources that are affordable and sustainable must inevitably involve low-cost community resources – parents, children and adolescents, primary health care workers, teachers, grass-root workers and volunteers.<sup>16</sup> Some reviews have described the effectiveness of interventions aimed at improving cognitive stimulation and nutritional supplementation on child development outcomes.<sup>17</sup>

Non-specialist health workers form the backbone of any service for people with mental disorders. Integrating child mental health tasks in primary health care should begin at the antenatal level; the validity of this approach has been proven in developed countries as well as low and middle income countries (LAMIC).<sup>18</sup> Maternal mental health is a major determinant of poor CAMH; advocating for the reduction of risk factors associated with maternal depression, such as gender-based violence, may constitute powerful strategies for prevention of mental health problems across generations.

For any model of mental health service to succeed, its usefulness must be demonstrated to policy-makers, health planners, professional colleagues, and the general public.<sup>10</sup> Child Mental Health services can be integrated into the primary care network, and the public health aspects of CAMH services have important relationships with general health.

Schools have an important role to play in the health of children. School-based mental health services also have the potential for bridging the gap between need and utilisation by reaching disadvantaged children who would otherwise not have access to these services.<sup>19</sup> School-based interventions may be environment centred or child-centred. Environment-centred approaches aim to improve the educational climate and to provide healthy programmes and role models for the child. Child-centred approaches involve individual mental health interventions for children in need, alongside more general classroom programmes to improve coping skills, social support, and self-esteem.

### Conclusion

Low income countries need to give emphasis on the child and adolescent population. Adopting a policy and action plan to move from ideality to reality and to develop feasible, resource-based, specialist & non-specialist child and adolescent psychiatric services is urgent need. It is necessary to identify strengths, resources, challenges and opportunities to restructure child and adolescent psychiatry in these countries to address growing need. Collaboration between different professional organizations in this region and assistance program at international and regional level will be helpful in these issues.

### References

1. World Bank. Available at <http://data.worldbank.org/topic/poverty> (accessed August, 2010).
2. World Bank. Available at <http://data.worldbank.org/topic/health> (accessed August, 2010).
3. World Health Organization 2003.785: Caring for children and adolescents with mental disorders: setting WHO directions. Geneva, Switzerland, World Health Organization, 2003.
4. World Health Organization. Atlas: child and adolescent mental health resources: global concerns, implications for the future. Geneva, Switzerland, World Health Organization, 2005.
5. World Health Organization. The World health report 2000: Health systems: improving performance. Geneva, Switzerland, World Health Organization, 2000.
6. World Health Organization. The World health report 2001: Mental health: new understanding, new hope. Geneva, Switzerland, World Health Organization, 2001.
7. Kessler RC, Adler L, Ames M, et al. The prevalence and effects of adult attention deficit/hyperactivity disorder on work performance in a nationally representative sample of workers. *J Occup Environ Med* 2005;47:565-72
8. Myrna M. Weissman, Susan Wolk, Risë B. Goldstein, Donna Moreau, Philip Adams, Steven Greenwald, et al.; Depressed Adolescents Grown Up; *JAMA* 1999; 281:1707-13.

9. Patterson GR, DeBaryshe BD, Ramsey EA. Developmental perspective on antisocial behavior. *Am Psychologist* 1989; 44: 329-35.
10. Rahman A, Mubbasahar M., Harrington R, Gater R. Developing Child Mental Health Services in Developing Countries. *J Child Psychol Psychiatry* 2000;41:539-46.
11. Patel V, Flisher Alan J, Nikapota A, Malhotra S. Promoting child and adolescent mental health in low and middle income countries. *J Child Psychol Psychiatry* 2008; 49:313–34.
12. Grimes T, Bergen L, Nichols K, Vernberg E, Fonagy P. Is psychopathology the key to understanding why some children become aggressive when they are exposed to violent television programming? *Human Communication Research* 2004; 30:153-81.
13. Nikapota AD. Child psychiatry in developing countries. *Br J Psychiatry* 1991; 158: 743-51.
14. Earls F, Raviola GJ, Carlson M. Promoting child and adolescent mental health in the context of the HIV/AIDS pandemic with a focus on sub-Saharan Africa. *J Child Psychol Psychiatry* 2008; 49: 295-312.
15. Belfer ML. What are the principles that should guide mental health policies in countries with low or middle income? Available at <http://www.rbpbrazil.org.br/portal/accepted-articles> (Accessed August, 2010).
16. Funk, M., Gale, E., Grigg, M., Minoletti A., & Yasamy, M. Mental Health Promotion: An Important Component of National Mental Health Policy. In Herrman H, Saxena S, Moodie R (Editors), *Promoting Mental Health: Concepts, Emerging Evidence, Practice*. Geneva Switzerland; World Health Organization, 2005.216-25p.
17. Engle PL, Maureen MB, Jere RB, Meena CD, Paul JG, Lydia K, Reynaldo M, Mary EY. Strategies to avoid the loss of potential among 240 Million children in the developing world. *Lancet* 2007; 369:229-42.
18. Minde K, Nikapota AD. Child psychiatry and the developing world: recent developments. *Transcultural Psychiatric Research Review* 1993; 158:743-51.
19. Armbruster P, Gerstein SH, Fallon T. Bridging the gap between service need and service utilization: A school-based mental health program. *Comm Ment Health J* 1997; 33:199-211.