**Julian Katz Oration**

# Suffer the little children: Strengthening mental health services for children and adolescents

**Professor Peter Birleson, RANZCP Congress Sydney, 24 May 2005**

## Introduction

I am going to talk tonight about child and adolescent mental health; its effects and the need for services; the shortfall of supply in Australia, what this might mean and what we can do about it. Child and adolescent mental disorders cause problems for families and countries everywhere in the world. The WHO has recently reported international prevalence rates using the World Mental Health Composite International Diagnostic Interview. Rates range from 4.3% in Shanghai, through 15% in Holland to 26% in the US (WHO 2004). The highest rates of mild, moderate and severe disorders are found in the US, with its culture of extreme materialism and competitive individualism. At its worst, this sees those in need as "losers" (Eckersley 2005). By comparison, the prevalence in Australia was at least 14%, using a different but comparable methodology (Sawyer et al 2000). I won't comment here on survey methodologies and inter-country differences, but will note that one in six means there are half a million under-18 year-olds in Australia affected by mental disorders. **,** This is cause for concern because diagnosis requires a symptom constellation plus individual suffering or impairment of function and development.

**<Figure 1 here>** Recent work in the Institute of Psychiatry in London should increase our concern. Collishaw (2004) has examined data on 15 and 16 year-olds

from three United Kingdom population surveys in the past 25 years. The National Child Development Study in 1974 and the British Cohort Study in 1986 together looked at nearly 18,000 individuals, and the recent British Child and Adolescent Mental Health Survey had data on 868 adolescents. These surveys used the Rutter A Scales or the Goodman Strengths and Difficulties Questionnaire, which was derived from the Rutter Scales. A calibration sample was used to impute Rutter Scale scores from SDQ scores. While these are based on parent ratings, there is a clear increase in conduct problems and a rise in emotional problems, particularly since 1986. Hyperactivity had not changed, but co-morbidity had increased. So the rates of mental disorder in childhood and adolescence seem to be rising.

**<Figure 2>** These disorders start at a young age. This figure comes from the recent WHO policy and service guidance package, and shows that mental disorders and personality problems emerge in childhood, apart from Substance Use Disorder and Schizophrenia (WHO 2005). I have added recent data from Duke University that shows anxiety and mood disorders can be reliably diagnosed in preschool children if we use appropriate methodologies (Angold 2004). Rates of ADHD, Oppositional Defiant Disorder, depression and Anxiety Disorders in the preschool population are similar to rates in older children. These mental disorders have adverse impact in childhood and increase the risk of disorder later in life (Cohen et al, 1993; Costello et al, 1999; Hofstra et al 2002; Meltzer et al 2003). The earlier they start, the more harm they can do to a child's development, unless they are helped to improve or resolve.

Rutter has shown that whether a disorder persists or improves depends on its type and on the persistence of external risk factors and internal vulnerabilities (Rutter 1995). External social determinants, like poverty, unemployment and parental mental illness, are usually chronic and act over time to maintain problems in children (DHS 1998; Meltzer et al, 2003). They operate through ongoing proximal social interactions such as emotional neglect, rejection or harsh punishment, or exposure to repeated trauma (Meltzer et al, 2003). Individual vulnerabilities are usually chronic, such as developmental disability, unstable attachment or co-morbid chronic physical illness. This is why modern treatment in childhood must be multimodal and aim to improve individual coping as well as addressing the risk factors that otherwise maintain problems. Research that examines continuity of disorder from childhood into adult life is complicated by the fact that some children improve while others become symptomatic (Cohen et al 1993; Costello et al 1999; Meltzer et al 2003; Lewinsohn et al 1999; Hofstra et al, WHO 2004). A steady rate in a population does not necessarily mean that the same children remain cases. The good news is that half of children with identified disorders do not meet diagnostic criteria when followed up several years later, although almost half do (Cohen et al 1993; Meltzer et al 2003). An individual case is twice as likely to persist into adolescence, with an odds ratio of 8.0, when a disorder is severe and there is significant impairment (Costello et al 1999).

**< Figure 3 >** In this table, I have graded tendency to persistence, from one plus meaning low to moderate persistence to four pluses meaning high persistence (over 80%). Attachment Disorder, Autism Spectrum Disorder and Childhood Schizophrenia,

are fairly stable disorders (Williams 2001; Asarnow & Tomson 1999; O'Connor et al 2000), while Obsessive Compulsive Disorder and Major Depression tend to relapse and recur (McCracken 2005; Lewinsohn et al 1999). Rates of depression peak in early adolescence, especially in girls (Cohen et al, 1993). ADHD has moderately strong continuity throughout childhood and adolescence, but does fall steadily with age (Cohen et al 1993). However, child and adolescent ADHD is a potent risk factor for later substance abuse, motor vehicle accidents and criminality in early adulthood (Satterfield & Schnell 1997; Mannuza et al 1997). Eating Disorders have moderate persistence for full and partial syndromes from adolescence into early adulthood (Lewinsohn et al 2000). Childhood anxiety disorders are the least likely to persist over time, but there is stronger continuity when there is a co-morbid chronic health problem, such as diabetes or asthma; if the mother has a mental illness and the environment is stressful (Meltzer et al, 2003). Despite being the least persistent disorder, adolescents with an anxiety disorder are 3.5 times more likely than their peers to suffer from anxiety or depression in adulthood (Woodward & Fergusson 2001).

The commonest childhood disorder is Conduct Disorder (CD), which is the juvenile version of Unstable Personality Disorder in adult life. This has moderately high persistence and follow-up surveys show that about half of children with CD have the diagnosis three years later (Meltzer et al 2003). 50% of adolescents with severe CD have diagnosable unstable personality disorder as adults (Loeber et al 2002), and two out of five adolescents with CD rated as severe by parents had a police arrest by the age of 30 years (Collishaw et al 2004). The stability of CD is highest in males and when

the disorder is more severe (Cohen et al 1993; Costello et al 1999). The key factors in the persistence of CD from childhood are co-morbidity with ADHD, co-morbid educational or learning problems, low socio-economic status, poor maternal mental health and punitive parenting (Herpertz et al 2001; Meltzer et al 2003). Children with CD and depression create very high costs as adults, from increased medical care, criminal justice involvement and welfare (Knapp et al 2002). Childhood psychiatric disorders have an adverse impact on social and personal development.

I want to briefly mention schizophrenia, which has a low incidence in childhood (Asarnow & Thomson 1999). In a recent editorial in the British Journal of Psychiatry, Cooper noted that incidence rates vary between countries by a factor of less than 3 (Cooper 2005). However, wider variation ranges occur within countries. Incidence rate ratios of greater than 4 are seen in the lowest social classes of the indigenous white and immigrant black populations, with a higher rate in the second generation of immigrants. The underlying vulnerability to schizophrenia seems to be determined in the early stages of life. A study of children and adolescents presenting with psychotic disorders in Holland (Patino et al 2005) showed psychosis to be four times more likely in those with a history of both migration and family dysfunction. Family dysfunction was recorded if at least three of the following was reported: poor relationship between adults in the household; lack of warmth between parents and child; overt disturbance of mother-child or father-child relationship; overt disturbance of sibling-child relationship; parental overprotection or child abuse. Exposures to socially mediated environmental stressors in childhood seem important in the development

of schizophrenia, which means prevention programs probably need to target families and children at risk rather than individual adolescents (Cooper 2005).

**< Figure 4 here>** This figure graphically demonstrates the burden caused by mental disorders in childhood. Of the total burden of disease caused globally by neuro-psychiatric conditions, 30% occurs in childhood and adolescence (WHO 2003). While many children do improve, with symptom or impairment scores dropping below diagnostic thresholds, Costello has shown that these sub-threshold children usually have impaired functioning and need help too (Costello et al 1999). Both full and sub-threshold mental disorders in childhood increase risk of secondary morbidity from processes such as psychological trauma, social exclusion and school failure (Sawyer et al 2000; Meltzer et al 2003). **< Table 1 here>** Among the many adverse outcomes are reduced self-esteem or confidence, social withdrawal, aggressiveness and insensitivity to others, mistrust in relationships, failure to develop adaptive coping styles, impaired learning, school dropout and reduced occupational opportunity, health risk behaviours, increased risk of substance use and other mental disorders, as well as increased family conflict, breakdown and homelessness (DHS 1998; US SG 1999; Sawyer et al 2000; Meltzer 2003). In addition to the impact on the children, there is significant impact on their parents and families with interpersonal conflict, additional costs, parental worries and depression (Meltzer et al, 2003). Almost one third of parents visit their GP because of the adverse impact on them. In summary, children with mental disorders bear a major burden in suffering, lost opportunities and reduced social and economic outcomes.

Unfortunately, all Australian surveys have shown a serious lack of services for children (Thornicroft & Betts 2001, Sane 2004, Sawyer et al 2000). *"There is a significant lack of services, dollars and providers throughout Australia for children and youth services, including residential respite, community options, acute and family interventions. There is widespread concern that service availability is not equal to the task of meeting increasing population needs with children and youth in either the mental health or primary care sectors."* (Thornicroft & Betts 2001, P 12). The National Survey found that only a quarter of Australian children with identifiable mental health problems receive help, mostly from their GP or paediatrician (Sawyer et al 2000). Even when a disorder is recognized and help is actively sought, only half get it (Sawyer et al 2000). Barriers to care include failure to recognize problems, stigma or fear and lack of resources (Sawyer et al 2000, WHO 2003). We need better education of parents and primary professionals to improve recognition and reduce stigma, and we need to double community-based services in all states to meet the need. My own service in Victoria can only accept about 50% of referrals in order to keep our waiting list below three months. We must turn away as many as we accept. We assess acuity, severity, complexity and risk by telephone to categorize and prioritize referrals; we triage those we don't accept to other public or private sector services; we support these other services to provide prevention and early intervention, and we deliver the best care we can to those we accept (CDH&AC 1999).

Raphael has described the population-based tiered service model in Australia where the Primary Care tier of GPs, teachers and welfare workers is responsible for primary

mental health care including early identification and prevention programs (Raphael 2000). This Tier One workforce has limited training and capacity for mental health care, especially in Education and Community Health where funding is limited. While we know that preventive programs in childhood are effective when they are multimodal and target multiple risk factors concurrently (Durlak & Wells 1997, WHO 2004), few such programs are being funded. In Victoria there is one pilot early intervention program for conduct disorder, and this is being extended to more primary schools. However, other problems are not being targeted, apart from MindMatters and occasional programs for anxiety and depression in a handful of schools. Primary mental health care is not consistently available to those with mild and moderately severe disorders. Moderate to severe mental disorders are supposed to be referred to Tier Two mental health services, such as Student Support Services, private psychologists and psychiatrists. But, these services are not universally available and responsibilities for service provision are often unnclear. Tertiary multidisciplinary CAMHS are targeted at the 2% of the population with the most complex and high-risk disorders (NSW Health 2001). In Victoria, there are gaps in specialist mental health services for the under five population; CAMHS waiting lists are often high; there are no respite care services, no child day rehabilitation programs, no in-home mental health treatment services and few youth services. While the tiered model is logical, it is not being adequately funded or coordinated.

Responsibilities are shared between many different service systems and this complexity helps to hide the fact that there is a problem with this system of care.

The effectiveness of the Primary and Secondary Tiers, who see the largest number of patients, isn't being measured. Effectiveness research within specialist services is difficult with so few child and adolescent psychiatrist academics and so little research money being spent on service evaluation. However, the available evidence on efficacy of specialist mental health care shows a consistent beneficial effect compared to no treatment, with different effect sizes in different clinical settings (Hoagwood et al 2001). Multi-systemic therapies that address multiple risk factors concurrently have consistently better outcomes (Henggeler & Lee 2003). Current practice in child and adolescent psychiatry is on the right track, as it uses multimodal treatment to address problems at the level of biology (medication), psychology (psychotherapies), social interactions (family and group therapies) and environment (systemic therapies). **< Figure 5 here >** This figure presents data from routine outcome measurement in Eastern Health CAMHS. The yellow column is the mean score on the Health of the Nation Outcome Scale for Children and Adolescents (HoNOSCA) of our recent clients. The orange columns represent HoNOSCA scores of clients entering Outpatient, In-Patient, Intensive Youth Outreach and Day Patient services. The green columns represent scores of individuals being discharged. Clients entering inpatient and intensive outreach services have more severe psychopathology, which shows these interventions are being targeted appropriately. We make a positive difference in all our services using this clinician-rated measure.

Since 2004, all publicly funded child and adolescent mental health services have implemented a standard suite of outcome measures under the National Information

Strategy of the Second National Mental Health Plan (Eager, Burgess & Buckingham 2003). The Australian Mental Health Outcomes Classification Network has now been established to give researchers access to a national data store, but all services need to explore their own data if they want to improve their performance (AMHO&CN 2005). The exploration of the meaning of these relationships will be a complex task, but routine outcome measurement will help to improve care (Birleson 1998).

**< Figure 6 here >** The previous slide showed clinician-rated HoNOSCA scores, which can be thought to be biased. This shows client and parent-rated changes in Strengths and Difficulties Questionnaire (SDQ) scores in an inpatient unit with a mean length of stay of two weeks. There is a significant reduction in psychopathology, with some scores falling below the clinical range on discharge.

**< Figure 7 here >** Outcome measures can be used to explore the effectiveness of our treatment of specific disorders. For example, this bar graph shows HoNOSCA change on the Y axis, from the start of treatment until review or discharge. More change is achieved at the end of a course of treatment than during the treatment, and mood disorders are treated more effectively than disruptive behaviour disorders. Comparing treatment effectiveness with different problem types can show which treatment programs need to be improved or where staff training may be needed.

**< Figure 8 here >** Outcome measurement can help us to compare different client groups. Here, the change in mean HoNOSCA scores from assessment until discharge is similar for different age groups. The absolute scores of preschool children and school-age children are similar, but scores are higher in adolescents than children.

This seems to be because adolescents have developed more secondary morbidity, and this suggests that we need to intervene earlier in life. Outcome measurement will also help us to explore such questions. However, quality has a cost. Our own experience is that introducing and maintaining routine outcome measurement, with regular collaborative reviews adds approximately 7.5% costs. Alternately, it means that 7.5% fewer clients can be treated, or that recurrent funding needs to increase.

**<Table 2 here>** I have noticed that while government health departments demand accountability from service providers, they seem less interested in being accountable to us. The 2000 National Mental Health Report was the last to reveal comparative state expenditure on child and adolescent mental health services (CDH&A 2000). This contained 1997-98 data that showed that under-18 year olds, which form 27% of the population, only got 7.5% of mental health funding or one quarter the per capita spending on adults. State spending is listed in descending order. The Commonwealth stopped reporting comparative figures after one state director objected to the comparison, argued that there was variation in the counting and opposed further reporting instead of seeking consistent accounting rules. Unfortunately, this has obscured mental health spending on children, and made it easier to reduce. Despite the emphasis on prevention and early intervention in national and state mental health plans, funding for children and adolescents in Victoria has fallen. Victorian expenditure is published annually and this has showed that relative expenditure on <18 year olds has gradually dropped from over 10% of the total mental health budget in 1996/7 to 8.0% in 2004/5 (H&CS 1996; DHS 2001; DHS 2004).

**< Table 7 here>** It is possible to obtain figures from the UK, and these highlight our relative disadvantage. While the UK is not comparable with Australia in all respects, as there are fewer private child psychiatrists there, the 2% of the population with the most severe, complex and disabling disorders tend to use public mental health care in both countries. In 2000, the UK Department of Health engaged Durham University to undertake a service mapping of the size and extent of CAMHS in England and Wales [www.dur.ac.uk/camhs.mapping/]. This showed inequitable and inadequate service distribution in many areas and has led to £250 million being allocated to CAMHS development in the last three years, plus £40 million for capital works (www.camhs.org.uk/documents/, DoH 2003). Direction for deploying this funding was provided by the *National Service Framework for Children, Young People and Maternity Services: The Mental Health and Psychological Well-being of Children and Young People* (DoH 2004). Services are to strengthen specialist activity and also build capacity in other sectors to deliver prevention and early intervention programs to target high-risk children and those with early disorders. Primary CAMHS teams are working with schools, community health services and welfare services to achieve this. Local inter-sectoral partnerships are being supported and UK CAMHS funding is 2-3 times CAMHS funding in Australia.

Current UK targets for community CAMHS with teaching responsibilities are for at least 20 whole time equivalents (WTE) per 100,000 total population, while for smaller non-teaching services the target is 15 WTE per 100,000 total population. By comparison**,** Victorian community CAMHS funding supports 27 EFT per 100,000 <18

year-olds, or 7.6 EFT per 100,000 total population. Victoria needs to double the resource allocation to CAMHS of it is to match UK recommended levels for non-teaching hospitals. We reach a similar conclusion, if we use the NSW Mental Health Department's own clinical care and prevention model for service planning to calculate need, (www.**health**.nsw.gov.au/policy/cmh/mhccp.html , NSW Health 2001). This estimates that the resources required for comprehensive CAMHS service provision, including prevention and early intervention, are 65 EFT per 100,000 <18 year-olds or 18.2 EFT per 100,000 total population, which is close to UK targets. However, actual NSW figures fall below this. Kelvin has recently produced a model to calculate the CAMHS staffing needed to provide evidence-based services, which suggests that even more EFT staff are required to meet demand (Kelvin 2005). Sadly, there seems little will to develop an Australian model that can predict need for specialist third tier services, and that takes into account the level of primary and secondary services available.

If current evidence suggests that we need to at least double funding for community-based child and adolescent mental health services, why is funding falling? This seems to have occurred for several reasons. Federally, the Liberal Government seems to have dropped mental health as a priority. The Commonwealth Mental Health Branch has almost disappeared in the last reorganization of the Department of Health and Ageing. Compared to the First and Second National Mental Health Plans, the Third Plan is poorly designed, has unclear strategies and very limited funding (Australian Health Ministers 2003). The Plan claims to aim for comparable quality of care to other developed countries, to reform funding models and improve workforce supply and

distribution, but no clear strategies or outcomes are provided. At the same time, Government philosophy is to reduce public services in favour of individual choice and user-pay arrangements, so the economically disadvantaged sectors of the community with the poorest mental and physical health are likely to be increasingly challenged. At the state level, most Labour Governments have an espoused commitment to triple bottom line accounting, with an emphasis on social and environmental performance as well as financial accountability (Elkington 1998). However, all state treasuries run tight fiscal policies that constrain commitments to building capacity and creating accessible mental health services.

I have had the privilege of working with the Mental Health Branches of the Victorian and Tasmanian State Mental Health Branches to review their CAMHS, and can offer several observations on why CAMHS are under-funded. The first is that children and CAMHS barely register on their radar unless there is adverse publicity. The main game is managing demand and improving quality in adult mental health services. As funding for adult services is also inadequate, “severe mental illness” has been interpreted everywhere as “acute psychosis and depression with suicidal intent”. This has marginalized child mental health and CAMHS work, which is seen as less acute, less serious and less important. Continuity in Schizophrenic Disorders from childhood into adulthood is ill understood, and the relatively strong continuity of the high prevalence disorders doesn’t matter. Early intervention services are only being developed systematically in the area of early psychosis, which only affects about 1% of the population. There are very limited primary mental health services for adults

with high prevalence disorders, and prevention and early intervention services for children and adolescents are embryonic, if they exist at all.

In Victoria, there are structural, conceptual and informational restraints in the Mental Health Branch that also restrict its capacity to understand child and adolescent services. The Director employs adult psychiatrists, forensic psychiatrists and aged persons psychiatrists in the Chief Psychiatrist's Office, but no child psychiatrists. This is reflected in a very adult-centred branch culture. Relatively few complaints are received from CAMHS patients, because services are reasonably good if people can get past the intake processes and waiting lists. In any case, the branch only funds adult consumer organizations and adult consumer and carer consultants, and seem less interested in independent feedback about the needs of under-18 year olds. Most of the burden from the shortage of mental health services for children falls on other human service sectors, such as Education, Justice and Welfare. While these may complain about CAMHS unresponsiveness, this problem is not understood as the result of an under-funded system under strain, but as the result of CAMHS "preciousness" or because CAMHS are insufficiently "innovative".

This leads me to think that Child Psychiatrists need to better educate stakeholders about child mental illness and its treatment. We need to show that we are using evidence-based treatments in partnership with our consumers, and that we offer value for money. We must forge stronger political alliances within the community to urge increased investment in children's mental health. In Melbourne, the master of this activity is Professor Pat McGorry who has placed early intervention in psychosis

on the national stage and has attracted significant financial support for a youth-specific service in the Western Region. I have debated Pat over his proposal for a new specialist mental health sector for youth aged 16 to 25 years (McGorry 1996), as I have feared it will weaken services for under-16 year-olds. I have argued that most mental disorders have their origins in childhood and adolescence, and that the high levels of morbidity in the youth population result from our failure to intervene earlier with children, families and other service sectors to reduce risk factors and build coping and resilience before lives are hijacked by mental illness. If Youth Mental Health Services are the orphans of adult psychiatry, infant and pre-school psychiatry are the orphans of child and adolescent psychiatry and can only develop when CAMHS are adequately funded. We are all on the same side in wanting better mental health funding for populations of all ages.

I have been distressed and puzzled why funding bodies seem blind to the impact of mental illness on our children. It is a brain drain on our nation, like the losses incurred in the early years when children's development is not supported (McCain & Mustand 1999). But, the ignorance is partly the result of our failure to communicate effectively. I have been overwhelmed or intimidated by the size of the problem, but have realized that my failure was because I did not have a loud enough voice, had not developed enough alliances and wasn't using the right language. As I see more children being turned away from my service, and see my staff becoming more stressed trying to meet impossible demands, I am more convinced that we cannot give up. We must communicate about the personal and financial costs of not having

enough services, must ally with consumers to make more noise about this problem, and must show we deploy our resources as efficiently and effectively as we can.

We can all do this locally, but the College can help us by strengthening its policies, building political partnerships with consumer organizations, actively including the Child Faculty and providing information. I propose four recommendations:

1. The RANZCP actively seeks sponsorship from private industry or the Commonwealth Government to lead another public education program:

- To raise awareness about the personal and financial costs of untreated mental illness in childhood, adolescence and adult life

- To educate the community about prevention, early intervention and self-help, and referral pathways for all the major psychiatric disorders.

2. The RANZCP requests the Commonwealth Government Department of Health and Ageing to report annually on State expenditure on specialist mental health programs (including Child and Adolescent MHS) to allow comparison between states.

3. The RANZCP adopts the policy of equity in funding mental health services for children and adolescents. A reasonable first aim is to double the funding allocated to specialist CAMHS from 7.5% to 15% of the specialist mental health budget to achieve the following outcomes:

- Develop CAMHS primary mental health teams to build community capacity for primary and secondary MH care

- Reduce waiting lists and improve access to specialist services for infants, pre-schoolers, school-age children and adolescents with severe and complex disorders
- Strengthen access to specialist mental health services for children and adolescents in rural and remote communities.

4. The RANZCP advocates for parity with adult services in state funding of academic positions for child and adolescent mental heath services, to increase the critical mass for research. The proportion of research funds for child and adolescent mental health must also be equitable to better understand the development and maintenance of mental disorders, their prevention and effective treatment.

If God helps those who help themselves, it is time for action. Thank you for listening.

## References

Asarnow JR, Tomson MC (1999) Childhood Schizophrenia: A follow-up study. European Child and Adolescent Psychiatry 8 (suppl 1): 9-12.

Australian Health Ministers (2003) National Mental Health Plan 2003 – 2008. Australian Government, Canberra.

Australian Mental Health Outcomes and Classification Network (2005) Child and Adolescent National Outcomes and Casemix Collection Standard Reports. Ist Edn, version 1.1. Brisbane Queensland.

Birleson P (1998) Learning Organizations: A Suitable Model for Improving Mental Health Services? Australian & New Zealand Journal of Psychiatry. 32, 2:214-222.

Brann, P (2005) Outcome Measurement in a Child and Adolescent Mental Health Service, PhD Monash University, In preparation.

Burke KC, Burke JD, Regier DA & Rae DS (1990) Age of onset of selected mental disorders in five community populations. Archives of General Psychiatry 47: 511-518.

Cohen P, Cohen J, Brook J (1993) An Epidemiological Study of Disorder in Late Childhood and Adolescence: Persistence of Disorders. J Child Psychol. Psychiat. 34:869-877.

Collishaw S, Maughan B, Goodman R, Pickles A (2004) Time trends in adolescent mental health. J Child Psycho. Psychiat 45 (8):1350-1362.

Commonwealth Dept Health & Aged Care (1999) Mental Health Information Development: National Information Priorities and Strategies under the Second National Mental Health Plan 1998 – 2003. (First Edition June 1999), Canberra.

Commonwealth Dept Health & Aged Care (2000) National Mental Health Report 2000: 6th Annual Report: Changes in Australia's Mental health Services under the First National Mental Health Plan 1993-1998. Commonwealth Dept Health & Aged Care, Canberra.

Commonwealth Dept Health & Ageing (2004) Responding to the Mental Health Needs of Young People in Australia. Discussion Paper: Principles and Strategies. Commonwealth Dept Health & Ageing, Canberra.

Cooper B (2005) Immigration and Schizophrenia: the social causation hypothesis revisited (Editorial). Brit. J. Psychiatry 186:361-363.

Costello EJ, Angold A, Keeler GP (1999) Adolescent Outcomes of Childhood Disorders: The consequences of Severity and Impairment. J Amer. Acad. Child Adolesc. Psychiat. 38(2):121-128.

Department of health and Aged Care (1999) Mental Health Information development: National Information Priorities and Strategies under the Second national Mental Health Plan 1998-2003. Commonwealth of Australia, Canberra.

DoH (2004) *National Service Framework for Children, Young People and Maternity Services: The Mental Health and Psychological Well-being of Children and Young People.* Department of Health, London.

DHS (1998) The Health of Young Victorians. Prevention and Child health Section, Health Intelligence and Disease Control, Public Health & Development Division, Victorian Department of Human Services, Melbourne.

DHS (2001) Mental Health Policy and Funding Guidelines 2001/2, Department of Human Services, Mental Health Branch, Melbourne.

DHS (2004) Mental Health Policy and Funding Guidelines 2004/5, Department of Human Services, Mental Health Branch, Melbourne. Modelled budget - www.health.vic.gov.au/mentalhealth/funding/20042005mh_budget.xls

Durlak JA, Wells AM (1997) Primary Prevention Mental Health Programs for Children and Adoelscents: A Meta-Analytic review. American Journal of Community Psychology 25 (2): 115-151.

Eagar K, Burgess P, Buckingham B (2003) Towards National Benchmarks for Australian Mental Health Services: Information Strategy Committee Discussion Paper No 4. Commonwealth Dept Health & Ageing, Canberra.

Eckersley R (2005) The challenge of post-materialism. Weekend Australian Financial Review, March 24-28. 5 & 10.

Ehrensaft MK, Cohen P, Brown J, Smailes, Chen H, Johnson JG (2003) Intergenerational transmission of partner violence: a 20 year prospective study. J Consult. Clin. Psychol. 71:741-753.

Elkington J (1998) Cannibals with Forks: The Triple Bottom Line of Business. New Society, Stoney Creek, CT.

Foster EM, Connor T (2005) Public Costs of better Mental Health Services for Children and Adolescents. Psychiatric Services 56:50-55.

H&CS (1996) Purchasing Better Mental Health Services in Victoria: 1996-97. Health and Community Services, Psychiatric Services Branch. Melbourne, Victoria.

Henggeler SW, Lee T (2003) Multi-systemic treatment of serious clinical problems. In Kazdin A & Weisz JR (Eds) Evidence-based psychotherapies for children and adolescents. (pp301-322) Guildford, New York.

Hoagwood K, Burns B, Kiser L, Ringeisen H, Schoenwald SK (2001) Evidence-Based Practice in Child and Adolescent Mental Health Services. Psychiatric Services 52: 1179-89.

Hofstra MB, Van der Emde J, Verhulst FC (2000) Continuity and Change of Psychopathology from Childhood into Adulthood: A 14 Year Follow-up Study. J Amer. Acad. Child Adolesc. Psychiat. 39(7): 850-858.

Hofstra MB, Van der Emde J, Verhulst FC (2002) Child and Adolescent Problems predict DSM-IV Disorders in Adulthood: A 14 Year Follow-Up of a Dutch Epidemiological Sample. J Amer. Acad. Child Adolesc. Psychiat. 41(2): 182-189.

Kelvin RG (2005) Capacity of Tier 2/3 CAMHS and Service Provision: A Model to Enable Evidence-Based Service Development. Child and Adolescent Mental Health 10(2): 63-73.

Knapp M, McCrone P, Fombonne E, Beecham J, Wostear G (2002) The Maudsley long-term follow-up of child and adolescent depression: 3. Impact of co-morbid conduct disorder on service use and costs in adulthood. Br J Psychiat. 180: 19-23.

Lewinsohn PM, Rohde P, Klein DN, Seeley JR (1999) Natural Course of Adolescent Major Depression: Continuity into Young Adulthood. J Amer. Acad. Child Adolesc. Psychiat. 38: 56-63.

Lewinsohn PM, Striegel-Moore RH, Seeley JR (2000) Epidemiology and Natural Course of eating Disorders in Young Women from Adolescence to Young Adulthood. J Amer. Acad. Child Adolesc. Psychiat. 39(10): 1284-1292.

Loeber R et al. (2002) What are the adolescent antecedents to adult personality disorder? Crim. Behav. Mental Health. 12 (1):24-36.

McCain M, Mustard JF (1999) The Early Years Study: Reversing the Real Brain Drain: Final Report. Government of Ontario Children's Secretariat. Toronto.

McCracken JT (2005) Obsessive Compulsive Disorder in Children. Ch 46.1 in [Eds Sadock BJ, Sadock VA] Kaplan and Sadock's Comprehensive Textbook of Psychiatry, 8th Edition. Lippincott, Williams & Wilkins, Philadelphia. pp 3280-3285.

McGorry PD (1996) The Centre for Young People's Mental Health: Blending Epidemiology and Developmental Psychiatry. Australasian Psychiatry 4:243-247.

McGovern CW, Sigman M (2005) Continuity and change from early childhood to adolescence in autism. J Child Psychology & Psychiatry 46: 401-408.

Meltzer H, Gatward R, Goodman R, Ford T (2000) The Mental Health of Children and Adolescents in Great Britain: Report of a Survey carried out in 1999 by Social Survey Division of the Office of National Statistics. Office for National Statistics. HMSO, London

Meltzer H, Gatward R, Corbin T, Goodman R, Ford T (2003) Persistence, onset, risk factors and outcomes of childhood mental disorders. Office for National Statistics. HMSO, London.

NSW Health (2001) Mental Health Clinical Care and Prevention version 1.1: A population health model. New South Wales Health, Centre for Mental Health, Sydney.

O'Connor TG, Rutter M, et al (2000) Attachment Disorder Behaviour following Early Severe Deprivation: Extension and Longitudinal Follow-Up. J Amer. Acad. Child Adolesc. Psychiat. 39(7): 850-858.

Patino LR, Selton JP, van Engeland H, Duyx JHM, Kahn RS, Burger H (2005) Migration, family dysfunction and psychotic symptoms in children and adolescents. British J Psychiatry 186:442-443.

Raphael D (2000) A population health model for the provision of mental health care. Commonwealth of Australia, Ausinfo. Canberra.

Rutter M (1995) relationships between mental disorders in childhood and adulthood. Acta Psychiatr. Scand. 91: 73-85.

SANE (2004) Dare To Care: SANE Mental Health Report 2004. SANE Australia, South Melbourne.

Sawyer MG, Arney FM, Baghurst PA, et al (2000) The Mental Health of Young People In Australia: Child and Adolescent Component of the National Survey of Mental Health and Well-Being. Commonwealth Department of Health and Aged Care, Mental Health Branch, Canberra.

Scott S, Knapp M, Henderson J, Maughan B (2001) Financial Cost of Social Exclusion: Follow-Up Study of Antisocial Children into Adulthood. Brit Med Journal 323: 191-194.

Thornicroft G, Betts VT (2001) Findings from the International Review of the Second National Mental Health Plan for Australia. Mental Health & Special Programs Branch, Dept Health and Ageing, Canberra.

US Surgeon General (1999) Mental Health: A Report of the Surgeon General. Substance Abuse and Mental Health Services Administration, Center for MH Services, NIMH, US Dept Health & Human Services, Rockville, MD.

WHO World Mental Health Survey Consortium (2004) Prevalence, Severity and Unmet Need for Treatment of Mental Disorders in the World Health Organization World Mental Health Surveys. JAMA 291 (21): 2581-2590.

WHO (2003) Caring for Children and Adolescents with Mental Health Disorders: Setting WHO Directions. World Health Organization, Geneva.

WHO (2004) Prevention of Mental Disorders: Effective Interventions and Policy Options: a report of WHO Dept of Mental Health and Substance Abuse in collaboration with the Prevention Research Centre of the Universities of Nijmegen and Maastricht. World Health Organization, Geneva.

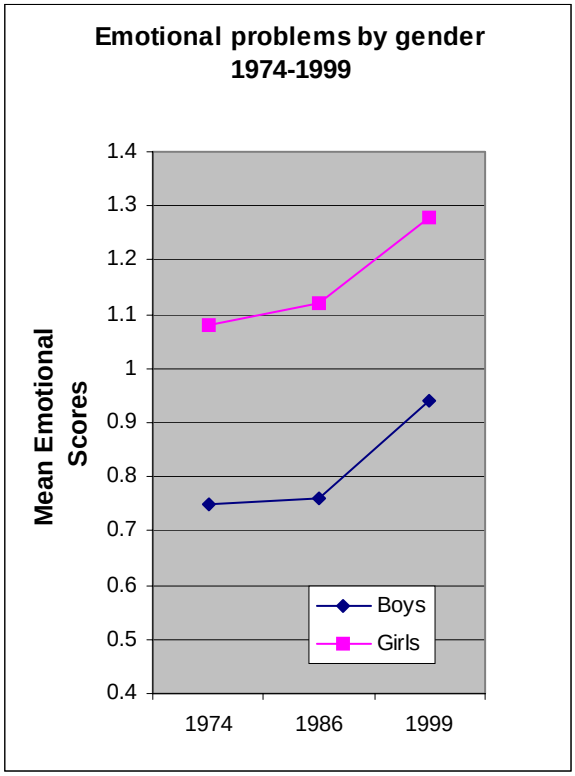
WHO (2005) Mental Health Policy and Service Guidance Package: Child and Adolescent Mental Health Policies and Plans. World Health Organization, Geneva.

Williams CY (2001) A longitudinal study of cognitive, language and social competence in adolescents and young adults with autism. Dissertation Abstracts International: Section B: The Sciences and Engineering 62 (2B) Aug 2001, 1121.

Woodward LJ, Fergusson DM (2001) Life Course Outcomes of Young People with Anxiety Disorders. J Amer. Acad. Child Adolesc. Psychiat. 40 (9): 1086-1093.

Figure 1.

Increasing Rates of Disorder in the past 25 Years. [Collishaw et al, 2004]



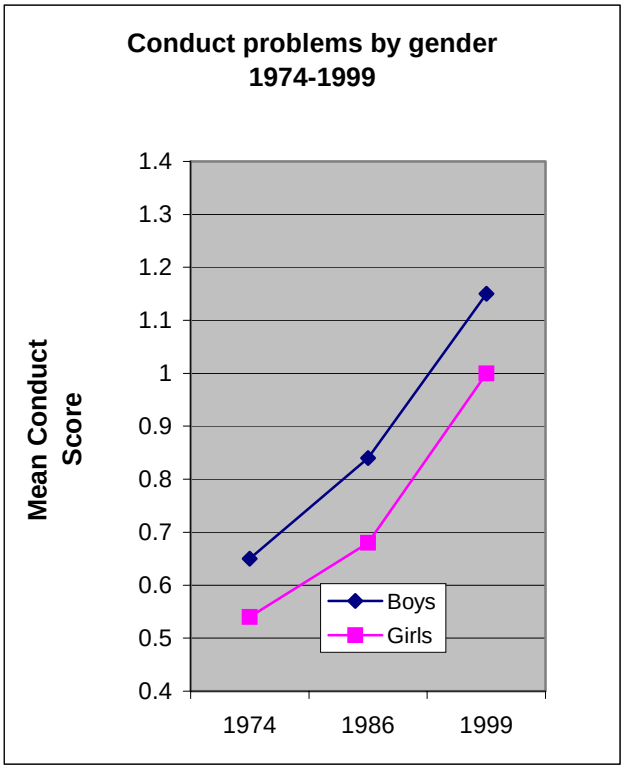
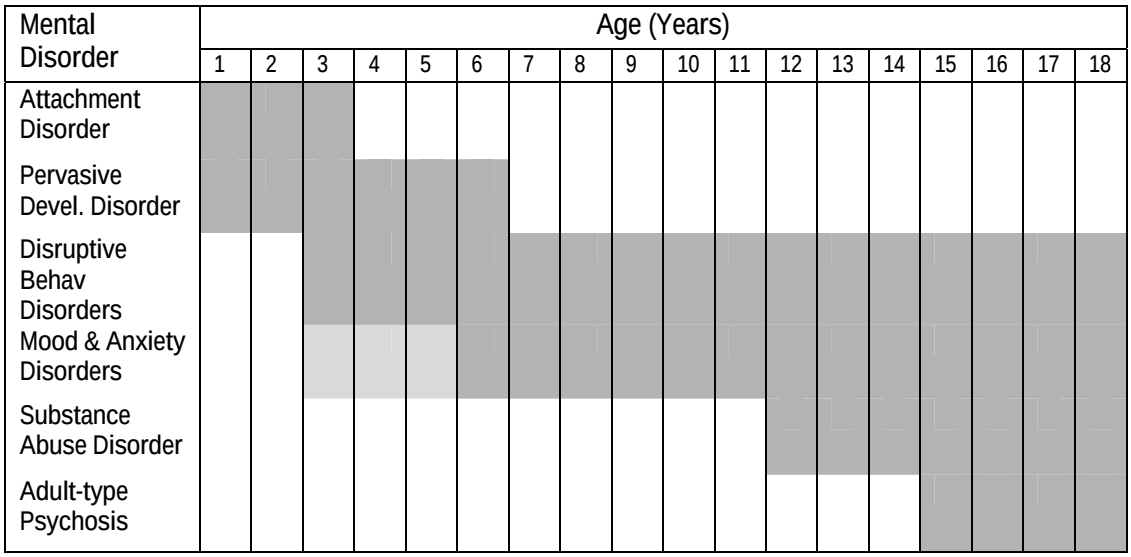



**Figure 2. Typical Age Range for Presentation of Common Mental Disorders.**



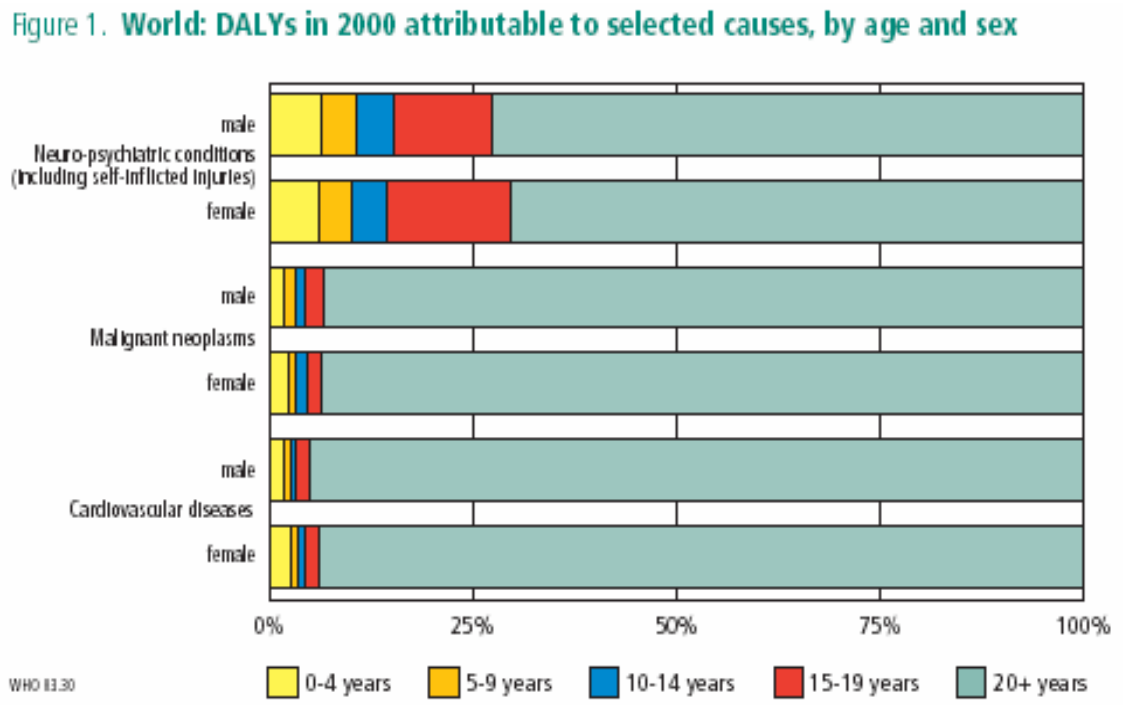

[WHO 2005; Angold 2004]

**Figure 3. Continuity of Child and Adolescent Psychiatric Disorders.**

| PSYCHIATRIC DISORDER | PERSISTENCE & RISK OF RECURRENCE |
|---|---|
| **Autism Spectrum Disorders** | **++++** |
| **Attachment Disorders** | **+++** |
| **Childhood-Onset Schizophrenia** | **++(++)** |
| **Obsessive Compulsive Disorder** | **++(++)** |
| **Major Depression** | **+(++)** |
| **Eating Disorders** | **++** |
| **Conduct Disorder (esp. if co-morbid)** | **++(+)** |
| **Attention Deficit Hyperactivity Disorder** | **+++** |
| **Anxiety Disorders (esp if co-morbid)** | **+(+)** |

[Williams 2001; McGovern & Sigman 2005; Asarnow & Tomson 1999; O'Connor et al 2000; Lewinsohn et al 1999; Cohen et al 1993; Meltzer et al 2003]

**Figure 4. The Burden of Disease associated with Neuropsychiatric Conditions in Childhood and Adolescence.**

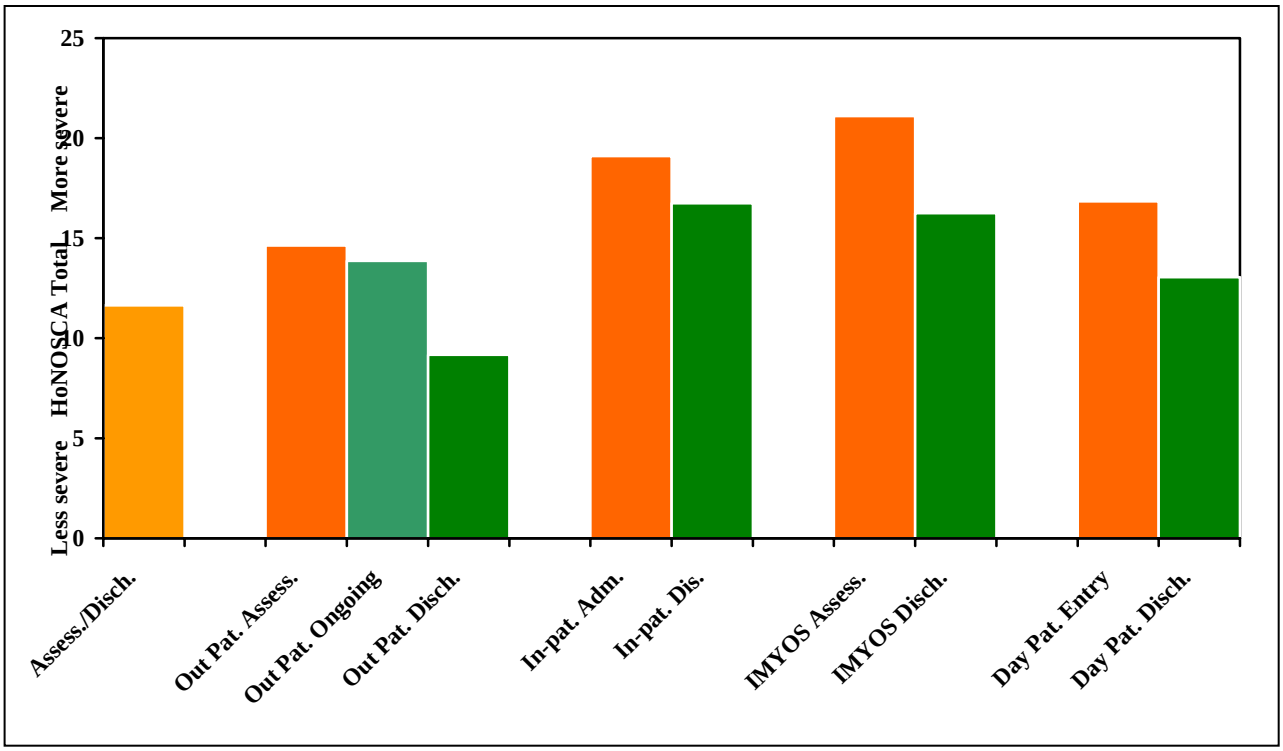



[WHO, 2005]

**Table 1. Adverse Effects of Disorder in Childhood and Adolescence**

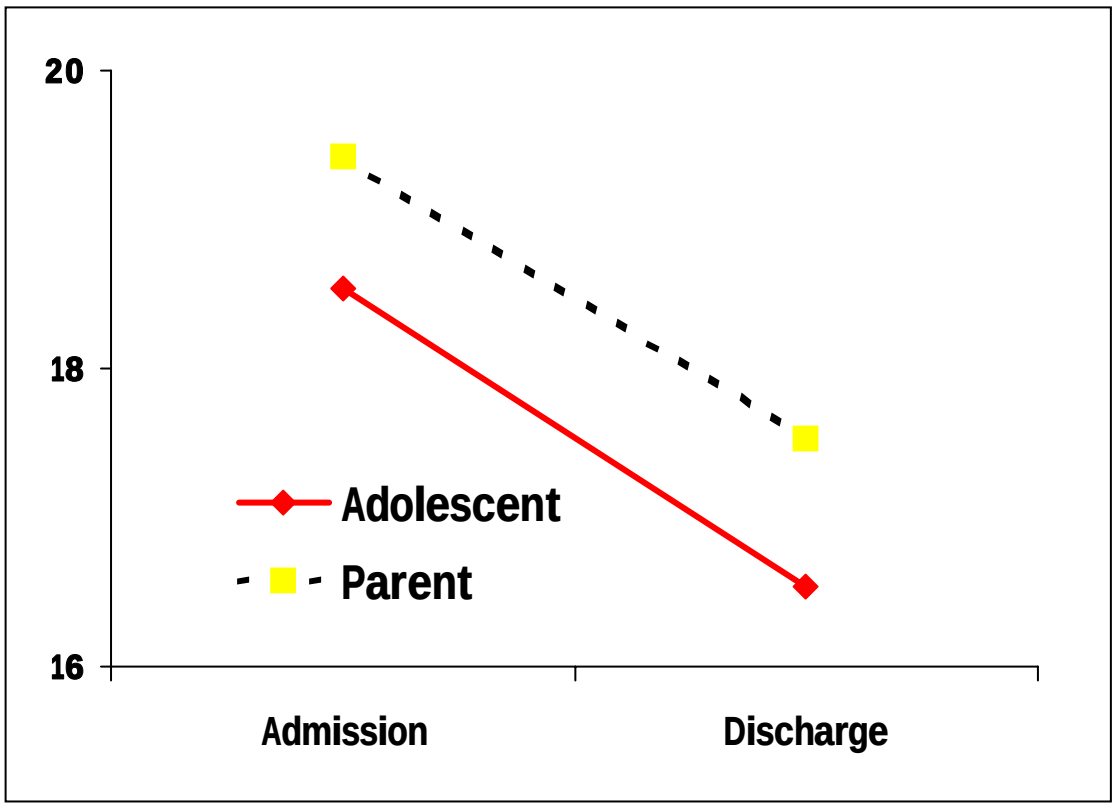
| Some Adverse Consequences from Psychiatric Disorder |
| --- |
| **Personal suffering & distress** |
| **Low self-esteem, negative cognitions & increased risk of depression** |
| **Social exclusion and relationship deficits with peers and others** |
| **Unhealthy habits e.g. avoidance in anxiety or social withdrawal in depression** |
| **Discordant family relations, increased punishment, rejection & homelessness** |
| **Impaired school performance & reduced vocational opportunity** |
| **Increased risk of misuse of alcohol and drugs, including cigarettes** |
| **Increased health risk behaviour, unprotected sexual activity and accidental injury** |
| **Increased costs on family from medical, educational, welfare and other needs** |
| **Increased rates of stress & mental illness in other family members** |
| **Increased rates of offending, arrest and criminal record** |
| [DHS 1998; US Surgeon General 1999; Sawyer et al 2000; Meltzer 2003] |

Figure 5. Emerging Evidence that CAMHS make a Difference.



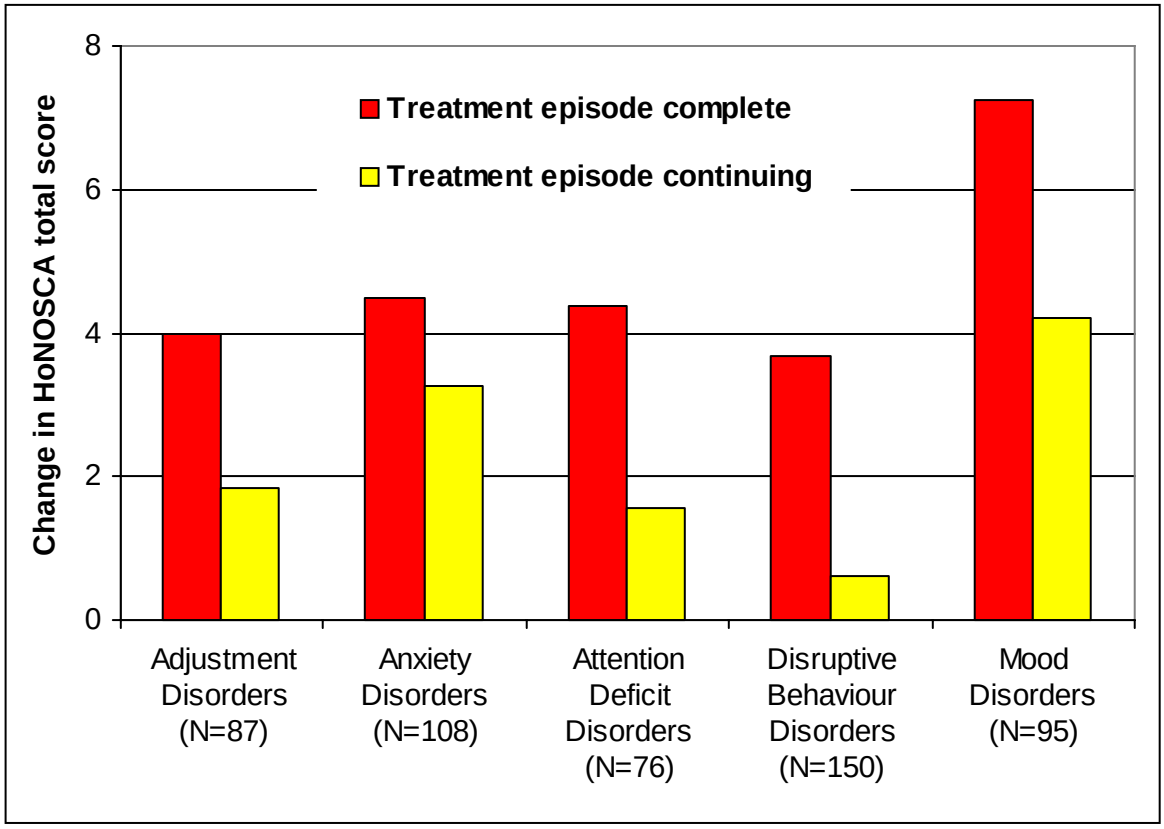

[Brann, 2005]

Figure 6. Adolescent Inpatients and Parents see a difference in 2 Weeks.



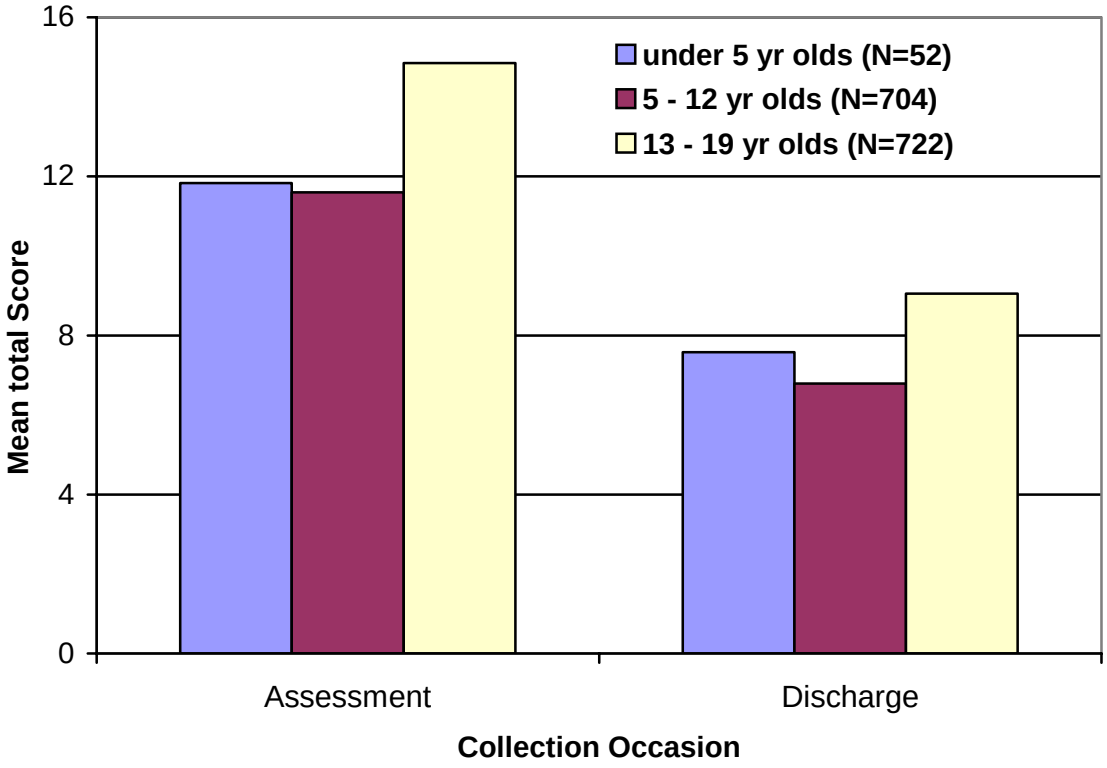

[Brann, 2005]

Figure 7. Exploring our Impact on Different Disorders.




[Brann, 2005]

Figure 8. Making a difference at all ages but increased severity and co-morbidity is seen in adolescence.




[Brann, 2005]

**Table 2. Australian State MH Spending on 0-17 year olds in 1997-98**

| Program and State Expenditure (National MH Report 2000) | Per capita |
|---|---|
| Australian Average Mental Health spending on Adults | $ 94.77 |
| Australian Average Mental Health spending on Aged | $ 102.91 |
| Average MH spending on Children & Adolescents | $ 23.37 |
| = 7.5% total MH budget | |
| | |
| South Australia CAMHS | $ 31.41 |
| Victoria CAMHS | $ 29.12 |
| Western Australia CAMHS | $ 27.28 |
| Queensland CAMHS | $ 24.84 |
| New South Wales CAMHS | $ 17.14 |
| Tasmania CAMHS | $ 14.73 |
| ACT CAMHS | $ 13.12 |
| Northern Territory CAMHS | $ 9.39 |

**Table 3. Comparative CAMHS Staffing Levels between Victoria and the UK**

| | |
|---|---|
| **Australian CAMHS Expenditure (1997/98)** | **$ 23.37** |
| **Victoria CAMHS Expenditure** | **$ 29.12** |
| **Mean UK CAMHS Expenditure (2001)** | **$ 57.6 equiv** |
| **CAMHS spending in London** | **$ 74.4 equiv** |
| **CAMHS spending in North West UK** | **$ 45.6 equiv** |
| **Current Victorian target community CAMHS EFT** | **7.6 FTE / 100,000 total pop.** |
| **Current UK target for community CAMHS with teaching responsibilities** | **20 FTE / 100,000 total pop.** |
| **Current UK target for community CAMHS with no teaching responsibilities** | **15 FTE / 100,000 total pop.** |
| **NSW MH-CC&P Model Target** | **18.2 EFT per 100,000 total pop.** |

[National MH Report 2000; National Service Framework for Children, Young People and Maternity Services 2004; NSW Clinical Care and Prevention Model ver 1.1 2001]

**Figure 2. Some Findings from the International Review of the Second National Mental Health Plan for Australia.**

***"There is a significant lack of services, dollars and providers throughout Australia for children and youth services, including residential respite, community options, acute and family interventions. There is widespread concern that service availability is not equal to the task of meeting increasing population needs with children and youth in either the mental health or primary care sectors." (P 12)***

***"The First and Second National Mental Health Plans, and their related service plans, are based on adult needs and not on those of children and youth, which may require services of greater intensity and duration. The numbers of qualified providers for children and youth services for the continuum of services needed from health to serious disorders is well below population needs." (P 17)***

**(Thornicroft & Betts 2001).**