

Conference Report: European Society for Child and Adolescent Psychiatry (ESCAP) 2015 Madrid

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The European Society for Child and Adolescent Psychiatry (ESCAP) met in Madrid 20-24/6/15. Madrid was balmy and hot. Spain's rich history as an empire builder is manifest through its fine architecture and memorable art galleries such as the Prado and Reina Sofia with a great range of paintings by Picasso, Miro, and Goya, and a couple by Munch. Madrid also looks after tourists with Tapas bars and dining in the squares in the long evenings. The Conference dinner was in the opulent rococo 19th Century Casino.

This major international meeting that rivals the American Academy of Child and Adolescent Psychiatry for size, but is so rich for the multi/cross cultural content. It is an internationally collaborative conference that enables one to take stock of where child psychiatry has got. There were an excellent series of 'state of the art' hour-long plenaries.

ASD Treatment: Sally Rogers, Professor of Developmental Psychology from the Mind Institute of UC Davis California, presented on early intervention in ASD. Lovaas was more or less right! Research on The Early Start Denver Model (ESDM) has consistently demonstrated that intensive intervention of 20 hours per week at two years of age for one year will enable language in most cases and lead to a dramatic and long term gain in IQ of 20-30 points, from a start of 50-60! RCTs and replications, including one from Melbourne (Vivanti et al, 2013), have led to the belief that outcome in ASD can be plastic! She showed impressive before and after videos, where skilled implementers demonstrated the development of reciprocal language and communication. 88% became verbal, and many showed significant changes of ADOS assessments 2 years after intervention. They have also shown that one hour a week intervention with parents and child, with the parents as implementers of a number of 'low intensity models' including additional approaches such as pivotal response training (PRT), has al-

most the same benefits. This means that we need to have widespread availability of ESDM or equivalent in Australia, as we cannot afford not to relieve such long-term disability. She has also done work on identifying ASD from an earlier age, and showed that symptoms of ASD generally start to become evident at 6 months, although the features are similar to attachment disorders. However 50% of parents report abnormal features by 1 year which should mean that diagnosis should be feasible by 1-2 years of age in these cases, rather than 4-5 years, which is the current age by which a professional diagnosis is usually made. This is of especial value as the brain may have greater plasticity with earlier intervention, and progress may be easier with teaching of skills at an appropriate age.

The positive emotions generated by intervention is motivating for both child and parents. Intervention should be provided based on a provisional diagnosis, rather than waiting for long-term changes. She concluded: "For some you can prevent ASD, and for some you can reverse their symptoms. Almost all can be improved!" Of note even Sir Michael Rutter has now acknowledged that the increase in prevalence of ASD has to be accepted as real and that aetiology of emotional environment (or neglect) in conjunction with oligo or polygenetics needs a fuller consideration.

Stefan Eliez, Professor of Child and Adolescent Psychiatry Geneva and the next president of ESCAP, presented on Vis a Vis: a fun web-based intervention for school aged ASD children on teaching them to read emotions in the eyes. It is performed with the support of an adult to reinforce social learning 4x20 minutes a week for 12 weeks. They have good pre/post results. It is available to anyone at a minimal price and can be accessed free by institutions: <http://www.visavis.unige.ch/vav/index.php/en-GB/>. Interestingly



improvements correlated with increased activation in the fusiform lobe, which is recognised to be underactive in ASD.

Prevention of Mental Illness: Celco Aranga, Professor of child and adolescent psychiatry in Madrid and Boston made an important case of the critical need for prevention and prevention research, focusing specially on risks for very early onset psychosis. He quoted the 19th century American reformer, Frederick Douglas: “it is easier to build stronger children than to repair broken men”. 20 years ago it was not considered possible to prevent diabetes, heart disease or cancer, but the research funding into prevention in these “high status” areas is **200 times** that of mental health with 200 times the number of publications! Prevention in these well-funded areas has made dramatic progress against all expectations.

However when you consider that 80% of all health morbidity in adolescents and young adults is psychiatric, and this is the starting point of adult mental disorder, the lack of priority for mental health funding and research defies understanding. For example, in UK only 4% of MH research funding goes into prevention. This lack of priority is reflected in the context of the lack of funding for C&A mental health services in Europe as well as in Australia where staffing at 30% of a basic first world service, and pressures as reported by NSW Faculty of C&A Psychiatry are greater than ever before. The problems include a lack of clear models for prevention of serious mental illness and the potential cost of intervention but these problems were dealt with in other areas by the investment in research.

However he made a compelling case for looking in greater detail at ways of enhancing neurodevelopment of the brain in our population. He quoted that large effect sizes are observed in some prevention/early intervention studies, and the dramatic cost/benefit of investment in research driven mental health intervention (as I outlined in ‘Health Economics for Mental Health and Intellectual Disability’ Schoolink Newsletter 2013; 4(2) 2-7). It seems that the critical stage for intervention in psychosis is in utero and infancy, and early signs of neurodevelopmental problems are seen in infancy.

There is a range of relevant genetic loci, which are a risk, but they are a risk for most mental health problems. Psychotic symptoms are surprisingly common and are found in up to 15% of young people, which are a risk for schizophrenia, suicide and other psychiatric disorders but they think these experiences are normal. In fact the risk factors for schizophrenia are risk factors for all psychiatric disorders.

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Psychosis is a reflection of abnormal developmental trajectory: motor delays in the first year, language and speech delays, solitary play and low IQ. Yet only 20% of infants are ever assessed for developmental delay. These neurodevelopmental problems predict psychiatric disorder, and the best predictor of psychosis is any other mental illness and problems in neurodevelopment in infancy and childhood. He proposed a staging model: that cognitive, motor and social delay develops into social isolation, which leads on to mental health symptoms and in due course on to psychosis. Those that don't get psychosis have an alternative psychiatric disorder. 75% of those with prodromal psychosis have had depression. He concludes that rather than looking at behaviour as a risk for psychiatric disorder, one should look at developmental trajectory. 33% of those with psychosis had motor development problems.

Academic failure occurs before any symptoms. Parental education, child poverty and neglect affect neurodevelopment. These observations make a good case for developing good epidemiology of population child mental health in which the key is neurodevelopmental optimisation from multifaceted approaches. This includes increased risk with older fathers, smoking and vitamin D levels in pregnancy and obstetric complications. These are preventable risk factors for psychosis.

- Any abuse increases the risk for any mental health disorder.
- Bullying increases the risk of psychosis by 5 times, and can be treated with parent training.
- Nursing home visiting has long-term benefit.
- Preschool enrichment programs improve cognitive control and executive function, IQ and lifetime income, and reduce the number of arrests.
- Treating ADHD prevents the development of substance abuse.
- Stopping child abuse reduces the rates of psychotic symptoms.
- Bullying and low IQ interact to increase the risk of the other.
- Cannabis reduces the age of onset of psychosis. Animal models suggest that peri pubertal diazepam prevents dopamine hypersensitivity, which is an animal model for psychosis.

This model suggests that (drug) intervention for minor problems at a sensitive stage prevents progression on to serious mental illness. There is also some suggestion that antioxidants alter the defence to psychosis.

Sally Rogers' presentation on the evidence for neurodevelopment recovery and enhancement is great timing. It remains remarkable that in Europe you need 2 hours training and an exam before you can own a dog, yet we don't obligate parent training! Nonetheless it is encouraging to hear that the European Union has declared that child and adolescent mental health prevention is the top priority for mental health research (Haro et al, 2014). Such a focus suggests programs on parenting, campaigns on bullying, school-based prevention research, research into healthy mental health lifestyles and research/intervention into high-risk

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groups such as abused kids and the neurodevelopmentally vulnerable. We should expect similar leadership on mental health prevention in Australia, but where is the research on the changes in current mental health policy where we are allowing mental health to be demedicalised and a shift of emphasis to the NGO welfare sector before there has been adequate recognition of the medical priority of child mental health.

In Finland, they have just introduced psychological rating assessments of all kids in all schools. They are not sure whether making schools more aware of the mental wellbeing of their pupils will reduce or increase the demand for mental health services. It seems to me we need routine measurement of mental health, connectedness, resilience and creativity at the same time as collecting information on developmental trajectory and mental health problems, in order to get schools competing for the best mental health scores, not just cognitive exam results.

Neurodevelopmental Disorders:

Jan Buitelaar Professor from the Donders Institute at Radboud University Medical Centre in Holland presented on ‘ADHD & ASD: 2 manifestations of the same condition?’. There certainly is overlap of symptoms, they commonly co-occur, they share genetic variance and processes and also

are associated with Developmental Coordination Disorder, Tic Disorder, Learning Disorders and a range of other developmental problems. He also presented on Neurofeedback for ADHD, with promising pre/post results in clinical but not cognitive improvement, but it wasn’t clear why the control group, focusing on amplifying brain electrical activity in a non-relevant brain location also provided improvements in ADHD symptoms. May be neurofeedback is an attention trainer.

Katya Ruby, professor of cognitive neuroscience at the Maudsley Hospital, presented on neuroimaging of disorders such as ASD, OCD, ADHD and Disruptive Behaviour Disorder. It was interesting to hear about the smaller size of basal ganglia in ADHD. Long-term treatment with stimulants reverses the reduction of dopamine production and the basal ganglia size, and improves activity in the right inferior frontal cortex and insula. They also reduce mind wandering which is seen by activity in identifiable “default mode networks”. ASD has smaller cerebellum and a ventro medial frontal cortex deficit. She described the diagnostic problems of neuroimaging because results are compared with average data, whereas if one allows the computer network to learn diagnostic specific patterns this increases image-based diagnosis eg up to 90% accuracy in ASD and Schizophrenia. She predicts that, in combination with genetic risks, neuroimaging will soon have diagnostic or subtyping value.

Improving diagnosis:

Ian Goodyer Professor of C&A Psychiatry in Cambridge presented on new diagnostic hypotheses for depression, which although is a reliable diagnosis has little validity. That is to say we have difficulty predicting which cases will get better and which will not. Just taking the current accepted symptomatic criteria, you could mathematically divide the symptom combinations into 100 subtypes. He then presented on



potential subtyping and bio-markers. How important are age effects? Is pre-pubertal depression with a prevalence of <1% and equal number of males, different to that in adolescents with a prevalence of 3-6% and a predominance of females? The 80% prevalence of mental health in adolescents' health morbidity suggests that age and stage of development is important.

His team is using item response theory, latent analysis statistics and hierarchical analysis to try to create more predictive models. For example this shows that the presence of misery is an important predictor of depression in adolescents but weight gain/loss is not. One of the best risk factors for all mental illness is a 'latent distress trait' found in 70% of MH cases.

Paradoxically latent distress trait is average in ADHD and low in conduct and disruptive behaviour disorder (doesn't that ring true clinically!). Psychotic experiences and depression are not related epidemiologically, except when united by latent distress, when it is indicative of greater severity. It is generally found that a higher rate of symptoms is indicative of more severe depression and greater difficulty in treatment.

In the 1950s Peter Medawar said 'genes propose and environments dispose'. One such example is the presence of genetic low level of serotonin transporter gene (5HTTLPR) plus history of child mistreatment was highly predictive of depression, when each on its own is not. He felt there was likely to be some endocrine risk factors and cognitive subtypes, such as persistent levels of high morning salivary cortisol that would contribute to further subtyping. For example teenage boys but not girls with high morning cortisol levels plus high depression score increases your risk of depression 15 times to 50%. This ultra high-risk group of boys also had memory deficits for autobiographical memory.

Why should adolescence be such a sensitive period for risk of adult mental illness? Possibly it is related to the development of myelination in the brain. Various studies show a reduction in grey matter volume in depression. For example in controls the grey matter size increases, while in the depressed adolescent it goes down.

The normal myelination process involves the myelination of the limbic system early in adolescence whereas the myelination of the prefrontal cortex lags behind well into the twenties. It may be in this lag phase between 15 and 25 years that predisposes adolescents to both depression and substance abuse. These epidemiological observations create novel hypotheses for identifying high clinical groups for major mental illness in adulthood. His presentation makes sense of why academics are already saying that DSM5 is already out of date. For my view, it is not out of date, but a valuable consensus clinical description, but work such as his, may in the future help us define different subgroups for whom different treatments may benefit.

The global decline in violence:

My trip is coloured by my reading of the remarkable book by Stephen Pinker, Professor of Psychology at Harvard, 'The

better angels of our nature' (Penquin, 2011; p1-1026)), which collates comprehensive evidence that we live in the safest times since civilisation began.

The last 40 years have seen a decline in homicide and violence for all reasons across the globe, and even 9/11 and problems in Iraq are small fry compared to global total deaths. This decline he documents not only includes wars and murders but also the decline of other forms of violence such as infanticide, especially of disabled children, the decline in bullying, child abuse including sexual, and the abuse of women and homosexuals. He attributes this to the global decline of dictatorship of any type, the decline of reliance on religious ideology and the growth of democracy with the separation of power between state and legal system.

Lastly it is related to the growth of reading (on the back of education) that has led to a growth in empathy, as reading exposes you to another person's point of view. This impacts of the type of relationships moving on from a zero sum game of confrontation, in game theory terms, to relationships of mutual gain. He describes progress of mankind as evolution followed by human social development, followed by history, but it seems that science and in particular medical science has helped bring consensus in humanism over ideology, and of course psychological development, and science is part of this remarkable history, despite unsettled times and set backs. In this context the growth of understanding child development and mental wellbeing is still a critical stage of human development.

The global spread of child mental health: There was a remarkable session on child psychiatry in the developing world. 'Our own' Joe Rey, retired professor of child psychiatry at University of Sydney and Director of Rivendell has edited a highly regarded free on-line textbook under the auspices of IACAPAP (the International Association of Child and Adolescent Psychiatry) which has already had 74,000 downloads. The website provides podcasts and interviews with patients (<http://iacapap.org/iacapap-textbook-of-child-and-adolescent-mental-health>).

Teaching is aided by downloadable PowerPoint slides, which are easy to use. It is increasingly being used in countries like Myanmar, where there is no child psychiatrist, or Nepal, Ethiopia or Egypt but also in some of the big teaching centres of the first world. This has been backed up with the WHO's mhGAP Intervention Guide (mhGAP-IG) for mental, neurological and substance use disorders for non-specialist health settings, which is an evidenced-based training in low intensity clinical skills for non medical professionals (http://www.who.int/mental_health/publications/mhGAP_intervention_guide/en/).

A further complementary initiative is the use of a 'Massive Open Online Course' (MOOC) (presented by Bruno Falissard Professor from University of Paris Sud and president of IACAPAP). IACAPAP provides regular on-line training in C&A

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Mental Health with 6 hours of learning for 5 weeks, including 20 short videos followed by questions and quizzes, whereby clinicians can obtain a child and adolescent MH certificate. 10,000 clinicians particularly in lower and middle-income countries have taken this course. It is so exciting to learn that our first world understanding of child mental wellbeing is just as applicable to understanding young people in these developing nations.

For example a teenager who stops eating and drinking may have depression or PTSD if you know to elicit the features, or a boy recurrently thrown out of schools may have ADHD. Such simple stories indicate that evidenced based understanding of children and adolescents applies the world over. The influence and growth of this knowledge should be unstoppable, and only limited by local politics and funding. But as we know it isn't all good news in mental health: in a session on mental health policy Professor Anastopolous from Athens described the rise and fall of child mental health. 25 years ago following the stepping down of the dictatorship and the introduction of democracy a significant community based psychiatry and child psychiatry service was established. Following the recent Greek financial crisis and subsequent austerity, murders and thefts have doubled and many child mental health services have been closed! They now have to review what their priorities are. Similarly in Slovenia the financial crisis is leading to the shutting down of child mental health services.

There were many other interesting presentations, for example on the importance of using clozapine in treatment resistant psychosis in children and adolescents, the modified treatment of OCD in ASD with CBT and response prevention intervention (diagnosed on a YBOCS). Michael Bowden our head of department presented on his PhD into the psychosocial risk factors in children having liver transplants, and although they have low rates of psychiatric disturbance, he now has the team sensitive to the risk factors.

I presented on the Developmental Psychiatry Clinic and Partnership independent review by the Centre of Disability Studies, which I described as '15 years of service development in 15 minutes': but will this important initiative for children and adolescent with intellectual disability and severe mental health problems continue to thrive, or will the closure of ADHC put us back again?

A global review: The conference concluded with a wake up call from the remarkable 80 year old Professor Norman Sar-

torius, a Croatian Psychiatrist who was head of the WHO Division of Mental Health, president of the World Psychiatric Association, of the Association of European Psychiatrists; described as "one of the most prominent and influential psychiatrists of his generation". He was an elder statesman in adult psychiatry when I was training 35 years ago, working on research criteria for schizophrenia and leading the development of ICD9. He provided a range of sweeping global observations on the wellbeing of child and adolescent mental health which don't get talked about by researchers or political leaders. Even many developed countries have underdeveloped parts (think of our own indigenous population) and he itemised a number of important global changes and challenges that are influencing child health and mental health, starting with looking at the socio-economic context:

Globalisation was promised to improve the lot for everyone, but appears to have only benefitted a few fabulously wealthy.

Urbanisation: Argentina is the most urbanised country in the world, with 95% living in cities of whom 50% have moved to towns in the last 20 years. How does one organise health care in towns of 20 million with rising rates of poverty and crime?

Decivilisation: ie the decline of care to the most vulnerable with increasing child mortality in much of the globe and increasing morbidity in the elderly.

Demographic Change: We have smaller families and potential population decline; for example China is trying to increase family size from an average of 1.1 to 1.2, and there are similar demographics changes in Europe. The middle class has grown eg in India and China, but is getting squeezed in the developed world, concentrating capital in the hands of a few, with both parents being obliged to work





while ending up with less purchasing power. Private health care is increasingly for the rich with the development of 2 speed health care service systems.

Insularisation: While we have more and more electronic communication, we have more loneliness and less human contact. School children are exposed to different cultures with different ways of thinking and different expectations. There is a marked rise in single children, without brothers or sisters to learn from. There is a rise of single parent families, now 28% in London. There is what the Archbishop of Canterbury called 'the epidemic of serial monogamy' with rates of divorce and remarriage, which makes it difficult for both children and the elderly to know which parent will care for them. There is the prolongation of childhood with a lack of exposure to responsibility till the 20s which is what confirms a person's self worth and self value. There is the rise of parent substitutes whereby children are increasingly brought up by carers so parents can work; particularly in Arabia children brought up by Philipino carers. Children spend less time with their parents. What age does childhood go up till? In India a girl is likely to be married and have a child by 13. The decline in the middle class also leads to a decline in moral norms.

Problems of providing mental health care: The development of **Commodification** by the world bank, everything is valued: health is controlled by cost constraint on choice of treatment not on the benefit to the patient. Health services are commodified by occasions of service and KPIs, not the worth of the patient and the doctor patient relationship. There is **Fragmentation of medicine** eg the surgeon of the right thumb! Psychiatry is subspecialising into schizophrenia specialists or specialists in bipolar disorder or early intervention. We now need case managers to explain the health system to the patient. **Medical Ethics** now focuses on the right to die, rather than the duty to live. There were 2000 assisted suicides in Belgium last year. The easiest to treat are now getting priority access to health, whereas the complex case has to wait. There is significant task shifting: as there are insufficient psychiatrists, GPs now have to treat psychiatric disorder. There are major problems of transition to adult mental health services. It is difficult to know

who is responsible: the parents, the GP, the school or the psychiatry team. The primary carer used to be the parent, but now we don't who is the proper parent. There is a failure of primary prevention: there is still inadequate iodine supplementation, leading to cretinism in parts of the world, and lead paint damages 500,000 children in the USA. Kids don't get glasses, which cost \$1.50 in Pakistan. General health checks should include mental health. All parents need parenting classes. There is a lack of consensus on priorities in health versus prevention and protection. There are high-risk groups who lack intervention: children of prisoners, or of parents with a mental illness. School dropouts create an urban problem. There is so much debate about the evidence on drugs, yet where are the RCTs on educational reform the largest investment in children, which happens with regular political change. **Areas of potential action:** we need to review the legislation and rules on availability of child mental health services. We need to speak not just of the levels of problems, but the capacity for improvement. ESCAP could set consensus international standards of training and practice against which to benchmark. So much of future developments are bound up with political process and we need to use enlightened opportunity to make politicians aware of the challenge. 30 years ago Rutter said that to a large extent we as an international specialist profession can shape the future of child mental health and this remains true. As a previous CEO of the Children's Hospital at Westmead said: "the future mental wellbeing of children and adolescents will have more impact on the future of Australia than climate change". This conference reminds us of this truth. We all have a duty to increase awareness and raise the debate that child mental health matters.

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