Society for Adolescent Health and Medicine annual meeting 2014

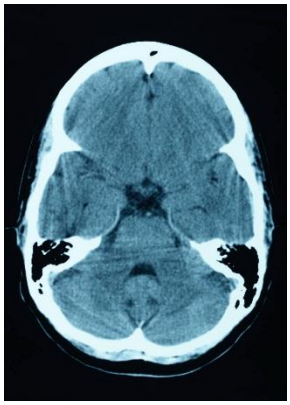
Nature & Nurture – Moving to a Deeper understanding of Adolescent Health

22nd - 26th March 2014

This meeting brought together 750 participants from the US, Canada and beyond. It was a series of research and plenary presentation. The 'Nature/Nurture' theme of the conference allowed the meeting to consider the interplay between genetically determined traits and the environment in the development of young people.

The following report includes a selection of diverse and hopefully interesting topics, some more closely related to the theme than others. I was fortunate to be appointed the new President of the International Chapter of the Society during this meeting. For the next three years I will act as a liaison between the Society and their far-flung international members. It is the first time in some years that a British member has taken this role, and the first time for a pharmacist – which reflects the increasing diversity of the Society's membership.

Gallagher Lecture



Adolescent Brain Development and its Implications for Primary Care: Vulnerabilities and Opportunities (Beatriz Luna, Pittsburgh)

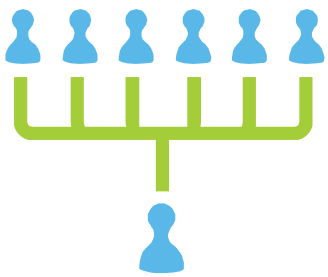
Dr Luna took us on a fast and fascinating tour of our developing understanding of the brain of a young person. *NB – Talking to some other 'brain scientists' who had listened to the lecture, they were not convinced by some of the things that were said. There is still a lot of debate and argument – it just goes to show that the science is still very young, and there is so much that we do not understand – but please read on and consider some very interesting work.*

There is a peak in sensation seeking during adolescence, an increased interest in novel experiences. A young person could put themselves in danger. Most young people, however, will not engage in serious risk behaviours.

Adolescence is a time of peak physical health, but also of relatively high mortality. There is an argument to say that suicide is a risk behaviour in itself, and that the intent may not always be to succeed. The teenage years may be a trigger for developing psychological problems in some young people.

Although much development has taken place through childhood, the teenage brain is still plastic. There is a tricky balance to be achieved between having enough motivation to make the effort to get on with schoolwork and hobbies, and organisation and planning that might 'override' the natural energy and motivation that a young person has in abundance.

Dr Luna gave a good illustration of the relationship between different parts of the brain. As the manager of her lab, she is the prefrontal cortex: she takes in reports from her lab workers, organises them, prioritises them, and then decides what will happen next according to the resources that she has. The 'Limbic system' in the brain is linked to emotions. The success of balancing impulse and motivation is all about connections. Motivation is good when it is channelled – to damp down motivation would not be good.



The last parts of the brain to mature are those that bring information together. Dopamine is a chemical that supports motivation. There might be a peak in dopamine levels during adolescence, and therefore the body is driven to explore.

There has been some argument about whether the organisational 'pre-frontal cortex' is developed by adolescence, and that this was why some young people took risks and acted on impulse. Dr Luna and her team believe that the pre-frontal cortex is already developed, but that a 'dopamine surge' can override it. Thus it is possible to create an elegant and complex plan to do something that is very risky.

Success in adolescence depends on a young person's ability to ignore compelling stimuli to stay in a goal-directed plan. Experiments have shown that teenagers show greater reactivity to rewards than adults. They assess, anticipate and then give feedback on the offered reward. If they start thinking about their reward just before they have to do something, then that could explain their impulsivity. Executive function is affected by a drive for immediate rewards.

Peer influence is a big factor in risk-taking among young people. For example, in a simulated car crash experiment, young people crashed more often when they did the task with peers.

There are implications for health from the turbulence going on in a young person's brain. It can make a young person vulnerable to risk-taking and mental health problems, but it is a time when the brain is 'sculpted', and most young people grow, develop and thrive. Health professionals should recognise that the teenage brain is still maturing. It could be effective to motivate young people with immediate rewards, and provide a description of care, not just statistics.

Hot Topics

The 'Genderation' of Adolescents – Fluidity, Identity and Puberty (Scott Liebowitz, Chicago)

In this topic, Dr Liebowitz encouraged us to move away from a rigid binary structure of gender identity. He talked about:

- gender non-conformity, which is a variation from the 'norm' of boys and girls
- gender discordance / incongruence, where an adolescent might start to question their identity
- gender dysphoria, where this tension might result in changes to mood and affect
- gender variance

In relation to gender, we traditionally talk about identity (who we are), expression (how we act), and identity/orientation (who we are attracted to). This can reinforce the male/female stereotypes. It might be more helpful to see gender as a spectrum.

It is important to consider the developmental stage of an adolescent when thinking about their own concept of their gender. For an early adolescent who shows concrete thought, the binary model might be the best one for them to engage with. Gender dysphoria is more obvious once an adolescent has moved over to abstract thought.

The development of secondary sexual characteristics is the time when adolescents can become distressed if they are questioning their comfort with their gender. Up to the Tanner 2 stage of development, adolescents can cope with their physical image. The use of pubertal suppression was discussed, but it was recognised that this could not be done indefinitely and, moreover, it might have an impact on future surgery. It might, however, 'buy time' while other more permanent strategies are decided.

Cutting Edge Contraception: What are MPTs and when can we use them? (Ellen Rome, Cleveland)

Multipurpose Preventive Technologies (MPTs) are innovations that are controlled by women to protect themselves from pregnancy and sexually transmitted infections. One example is a single-size diaphragm that would fit most women, used with a microbicidal gel. They are designed with input from users, and should be affordable. Dr Rome reported that, worldwide, 222 million women have an unmet need for contraception.

Regionally across the world, the needs might be different. For example, Africa is concerned about pregnancy and HIV, China about pregnancy and a range of sexually transmitted infections (STIs), and the US/Europe about pregnancy and viral STIs (herpes and human papilloma virus HPV). Similarly, different regions favour different formulations of medicines – the US is used to standard pills, while India might use an oral sustained-release formulation. Africa has experimented with several dosage forms, and there has even been a trial of a transdermal lotion in Copenhagen, Denmark. It is hoped that, one day, women will use MPTs in the same way that they use deodorant.

CAMI
COALITION ADVANCING MULTIPURPOSE INNOVATIONS

For more information about MPTs, see http://www.cami-health.org/documents/factsheet.pdf

Sex Trafficking and Child Sexual Exploitation CSE (Dr Abigail English, North Carolina)

Millions of children and young people (CYP) are likely to be affected by CSE globally. Trafficking reaps big rewards for the perpetrators, there is ongoing demand, and the 'purchasers' come from all walks of life.

The risk factors for CYP are at different levels: they are individual-, relationship-, community- and society-based. The consequences for CYP are physical and emotional. To tackle sex trafficking and CSE we need multi-sector / multi-agency global collaboration.

There are problems for CYP who are involved, as they might be treated differently by the law. Some of them may be incarcerated (like adult sex workers arrested for solicitation), which compounds the damage already done.

There are guiding principles that should govern the treatment of CYP:

- CSE and sex trafficking of minors should be understood as acts of abuse and violence
- Minors should not be considered criminals (they are victims)
- Identification and intervention with these CYP should do no further harm

ecpat

END CHILD PROSTITUTION CHILD PORNOGRAPHY & TRAFFICKING OF CHILDREN FOR SEXUAL PURPOSES

To achieve a lasting improvement, we must confront the problem of demand.

For further information, the ECPAT International have country-based reports about action on CSE and sex trafficking at www.ecpat.net

Research Special Interest Group

Youth Engaged Research—From Planning to Impact

We ran a session for people with a special interest in research where we discussed ways in which young people and their families could be more involved in the planning, design, completion and dissemination of research. This session was especially interesting as we had a number of young people and families from the "Familias en Accion" community research group in San Antonio, Texas who could help us to think through these issues. Some examples of the points raised in the discussion are below:

Aspect and Discussion Questions	**Notes**
Developing the research question	
Who identifies the research question?	• Perform a community needs assessment involving youth
How can youth become more involved in developing research questions?	• Form a youth advisory group to come up with ideas and research interventions • Organize monthly meetings with youth around a social activity
Research design and choice of methods	
How can youth be involved in research design?	• How questions are asked – ask the youth individually, ask open-ended questions for feedback about questions asked • Educate them on the benefits of research • Let them know it's confidential
Fieldwork (e.g. peer interviewers)	
Do some methods lend themselves better than others to youth engagement?	• Engaging youth in development of materials (e.g. surveys) • Concerns about deploying teen interviewers – collecting highly sensitive information, especially about health – 1:1 interviews is a learned skill, so it is hard to have youth simply pick it up quickly (and there may be an impact on data quality?)
Research analysis	
Does the group have any experience of involving youth in analysis?	• Give young participants feedback about what the research showed – is that what they intended to say? • An opportunity for them to clarify
Research dissemination	
Does the group have any experience of involving youth in dissemination?	• Youth presenting results of research at conferences

We plan to have a longer workshop session sharing good practice about 'how to' get young people and families more involved in research at the meeting next year. This meeting helped us to better understand the issues for young people and families, and to see how researchers have started to get people more involved.

Reflection:

The SAHM meeting is an excellent place to connect with health professionals and researchers who all have the effective care of young people as their top priority. It has given me an international network of like minds that help me improve my work. I came away feeling inspired by them, and ready to take on my next research project with some new insights. I look forward to working for SAHM over the next year.

Nicola Gray PhD MRPharmS FSAHM – April 2014