Adolescent Substance use and Mental Health Dr Bobby Smyth





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The Adolescent brain – a work in progress Giedd et al, 1999, Nature Neuroscience, 2, 861-863



Red indicates more gray matter, blue less gray matter. Gray matter wanes in a back-to-front wave as the brain matures and neural connections are pruned. Areas performing more basic functions mature earlier; areas for higher order functions mature later. The prefrontal cortex, which handles reasoning and other "executive" functions, emerged late in evolution and is among the last to mature.



ESPAD 2007-2011

%

- 35% had opportunity to use weed
- 4% smoke weed by age 13yo, rising to 18% by 16th birthday.
- Rates of cannabis use are similar
 - In all SE Groups



Cannabis 6+ times past month



General Population Survey 2009-2010 (NACD)



Among users, about 1/3 use once/week or less, 1/3 use twice/week & 1/3 Use more than twice/week

Drunk in the past month - ESPAD



ORIGINAL ARTICLE

Decline in Age of Drinking Onset in Ireland, Gender and Per Capita Alcohol Consumption

Bobby P. Smyth^{1,*}, Alan Kelly¹ and Gemma Cox²





ASSIST SCORES

	Mean	Median	IQR
Cannabis	29	31	24-36
Alcohol	24	26	17-31
Benzos	34	37	32-39

ASSIST = Alcohol, Smoking and Substance Involvement Screening Test (WHO)











ADHD & Substance use

• SUD (22%) common in ADHD teens

 Treated ADHD in childhood reduces risk of later development of SUD



Kollins SH (2008) ADHD, Substance use disorders, and psychostimulant treatment. J Attent Disorders, 12; 115-125

Delayed recovery after abstinence



Volkow et al (1992) Synapse, 11, 184-190.







Children as young as 11 hospitalised with alcohol poisoning Parents are often not there when gardai bring drunk children home

Zeigler DW et al (2004)

"Underage alcohol is associated with brain damage and neurocognitive deficits, with implication for learning and intellectual development"

Casey & Jones (2010)

"Many studies have reported altered brain structure and function in alcohol dependent or abusing adolescents..... smaller frontal & hippocampal volumes.....suggesting that early adolescence may be a period of heightened risk to alcohol's neurotoxic effects"

Doctor, I'm terribly paranoid.....

Drug and Alcohol Dependence 124 (2012) 128-134



The relationship between cannabis use disorders and social anxiety disorder in the National Epidemiological Study of Alcohol and Related Conditions (NESARC)

Julia D. Buckner^{a,*}, Richard G. Heimberg^b, Franklin R. Schneier^c, Shang-Min Liu^c, Shuai Wang^c, Carlos Blanco^c

Cannabis & Schizophrenia

- Cannabis use in adolescence leads to a 2-3 fold increase risk of Schizophrenia (Sz) in adulthood
- Population attributable fraction is about 8%
- Cannabis use neither necessary (up to 90% with Sz in rural populations have not used) nor sufficient, (majority who use don't develop Sz)
- Early onset of cannabis use increases risk
- Greater use appears assoc increased risk
- Interventions should seek to delay onset and reduce frequency of hash use

Arseneault et al (2004), BJPsych, 184, 110-117

Cannabis use causes damage to the memory

Jan Battles

TT'S not called dope for nothing: a study by Trinity College of Dublin's cannabis smokers has concluded that they have poorer learning ability and worse short- and long-term memory than normal.

MRI scans found that regular pot smokers had considerably lower levels of activity in areas of the brain used during facerecognition tasks. Other parts were hyperactive, suggesting the organ tries to adapt in order to compensate for the effects of the drug.

"Cannabis users were significantly worse with respect to learning and short- and longterm memory performance," concluded scientists at the university's department of psychology and Institute of Neuroscience.

A team led by Hugh Garavan used 35 cannabis smokers recruited from the general public and academic institutions around Dublin. On average they

had been using the drug for 5.7 years, had consumed it on 23 out of the previous 30 days but had abstained for roughly 15 hours prior to the test.

Only people who had consumed cannabis five to seven days a week for the past two years and had smoked a minimum of 500 joints in their lifetime were used in the study.

In one experiment they were shown a series of pictures of faces bearing names and were later shown them in random order, without names, and asked to identify them. There were "significant differences" between the cannabis users and nonsmokers on learning performance and percentage recall consistency. Non-smokers were able to recall almost sow of names compared with just over so% for cannabis users.

"The differences appear to be consistent with recent findings indicating deficits in learning and memory, supporting the notion that cannabis may impair learning, short- and long-term Continued on page 2

Persistent cannabis users show neuropsychological decline from childhood to midlife

Madeline H. Meier^{a,b,1}, Avshalom Caspi^{a,b,c,d,e}, Antony Ambler^{e,f}, HonaLee Harrington^{b,c,d}, Renate Houts^{b,c,d}, Richard S. E. Keefe^d, Kay McDonald^f, Aimee Ward^f, Richie Poulton^f, and Terrie E. Moffitt^{a,b,c,d,e}





"I tried to drown my sorrows, but the bastards learned how to swim"



Frida Kahlo 1907-1954





Severity of Depression



Severity of Anxiety



Learning which shoulder to cry on.....







DSH





"Alcohol was significantly more often involved in male episodes of self-harm than female episodes (42% and 36%, respectively)."

Increase in per capita alcohol consumption and Suicide in Ireland 1970 to 2000



- In NorthEast
 - 58% of young people who died by suicide were very drunk (i.e. BAC >160mg%)
 - Bedford et al (2006). Blood alcohol levels in persons who died from accidents and suicide. *Irish Medical Journal*, *99*(3), 80-82.
- In South
 - 40% of all deaths by hanging revealed alcohol use, with mean BAC=200mg%
 - Bellis M, Bolster MA & Doyle CT. (2009) The Role of Alcohol in Deaths Presenting to the Coroner's Service in Cork City & County. *Irish Medical Journal*, 102, 13-15.

Home News

Driver in fatal collision had alcohol take Drunken girl savaged by tiger at Dublin Zoo

Inquest records death by misadventure for two in car driven on wrong side of road

instantly with his friend when the Damien Greene of Tallaght Garda car in which they were travelling station was driven the wrong way before colliding with a vehicle driven by

A DRIVER WHO was killed with a Honda car driven by Garda the oncoming car. Then I remember a loud explosion and a big wave of heat." They were on the N7 outbound He told the inquest he could see

lane, about 500 metres north of clearly ahead of him, but he did an off-duty garda, had a significant the Rathcoole exit Mr Merriman

ning car or any because there could be a spee trap ahead," Mr Collins said. " velocity of the h/h and of the also thought the driver was mad cording to a for doing that high speed. ollision investi-"Suddenly there was a loud

bang and a puff of smoke in front ere was controof me. I did not know what hapk of No Entry pened but my first thoughts were th that the car that had passed me at the Rathcoole the teenagers high speed had lost control of the ong side of the car and hit the barrier." Mr Maguire, the first person on frien gns have since

Teenager who smashed glass in schoolboy's face is jailed A TERMAGEE after standard a sugrainall with seminancing by the prophymetric day between two Gorda matters and more man 100

an left over has been stilled for a large group of weeks with were. Caliban's requirise to the aut contemptat these mid-termine

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Judge Katherns Debiant and mentipation. The majority of

were under spe

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Walked on car parked

BY COURT REPORTER

A CORK man who walked on a parked car while visiting Kenmare with friends appeared on a charge of disorderhe conduct and failing i

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TRACTORIZATION AND ious' who had from serversiding - and that he is red stated that a his friesd motores earlier. Introcested by a The ber day shull s from another als was

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who has been had been one of the search was later attenued and anorpfier farth Sheerin said Culand teen of throws

Defendant tells court he acts obnoxious when he's drinking A 18 years old men, was directed in Asian Kowia Kilveter

Contraction 11. Tubbercurry

felt that

Alcohol is involved in more than 60 per cent of sexually trans-mitted diseases among teenagers, a specialist in genito-urinary med-icine has said. Dr Derek Freedman, who will

KITTY HOLLAND

Dr Derek Freedman, who will speak at a conference on teen-agers, at a Conference on teen-definition of a speak of the speak of the difference in Dubine the speak of the events, and the speak of the speak of the way of the speak of the speak of the speak of the young as I3 and 14, attending his clinic.

"If you took alcohol out of the equation numbers would be down by more than 60 per cent, definitely,"

it, " said Dr Freedman. b. Sana or Freedman. Dr Steven Rowan, director of the Rutland Centre in Dublin, Dr Steven Rowan, director of 1 the Rutland Centre in Dublin, who will specific an increasing agers, says who have a specific and a specific agers, says will be a specific and a specific and be so of teenagers and young be so of teenagers and young adults will because alcoholics if this evening transmission and a specific s Anise and a specific and a specific and s g Rowan will say an increasing pro-s young clients - ageol 16 to 25 worge clients - ageol 16 to 25 worge specific and have been diriking t teens and have been diriking young stranger and the specific and t teens and have been diriking t teens availy since their mid-t teens and have been diriking t teens and have been diriking 22: 222 22

THE IRISH TIMES Thursday, September 21, 2006

Alcohol a factor in

60% of teen STD cases, says expert

definitely." They were attending with "the very heavily since their early Though ne did range" of STDs, he said the said nave been drinking the said that of those teenagers increasing and the were figures. Though the did not solve teenages increasing and the were definitiely. That I am refs is attending. "What I am refs they are common of alkohol they are drinking eight to 30 per cent would go and Acohol and drinking eight to 30 per cent would go and Acohol attending they are make and the drinking eight to 30 per cent would go and Acohol attending the area of the and the and the and the and the and the anome of alkohol they are the anome of alkohol they are to the attudy and the and s 16-years make the minds up about the anome and the and s 16-years whether to have seer and some are alkohol of all 35 countries sur-ters.

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Alcohol a major factor in failure of rape cases

Many alleged victims unable to recall details of events

attaching office white DPP. The

CARGE COLLEGE

WATCH makes or by the Dissonant

SPECIAL REPORT

Alcohol a factor in half of all sexual assaults

Laura Finn examines the findings of the 2009 Annual Report of the National Sexual Assault Treatment Units, which found that alcohol had been consumed in half of all reported cases

The acceptability of alcohol as a facilitator of sexual interaction results in a tolerance for unwanted sexual activity when alcohol is consumed.

Alcohol as a 'Date-Rape' Drug



THAT'S MEN PADRAIG O'MORAIN

Parents need not be cowed by violent teens

HE ABUSE of parents by their adolescent children is not talked about much – and understandably so. This is one domestic problem parents don't want to broadcast to the neighbours or the wider family. For that reason, we don't

University of York, psychological abuse includes threatening to hurt or kill a parent or themselves, running away from home, name-calling, criticising and put downs. Physical abuse includes hitting, punching, slapping and pushing.

Prevention





Age of onset cannabis use



Rates of cannabis use – Ireland & Portugal 1995 to 2011ESPAD survey results











Alcohol in the European Union

Consumption, harm and policy approaches



- Increase cost
- Reduce availability
- Curtail promotion



Steering Group Report On a National Substance Misuse Strategy February 2012



Adolescents and Substance Use: The handbook for professionals working with young people



"This highly practical manual presents an ideal introduction to adolescent substance use. It offers invaluable guidance for all professionals involved with adolescents including social workers, health and social care professionals, family support workers, teachers, counsellors, mental health teams, A&E staff, police and probation officers. The approach these practitioners take in dealing with the problem has considerable influence over outcomes"

http://www.radcliffehealth.com/shop/adolescents-andsubstance-use-handbook-professionals-workingyoung-people

Conclusions

- Alcohol is a major contributor to mental health problems in Ireland
- The number of teenage lives being seriously damaged by cannabis has greatly increased in past 5 years
- Parents are part of the collateral damage
- There are steps we can take to reduce alcohol problems
- Cannabis legalisation is not part of the solution