

Adolescent Substance use and Mental Health

Dr Bobby Smyth

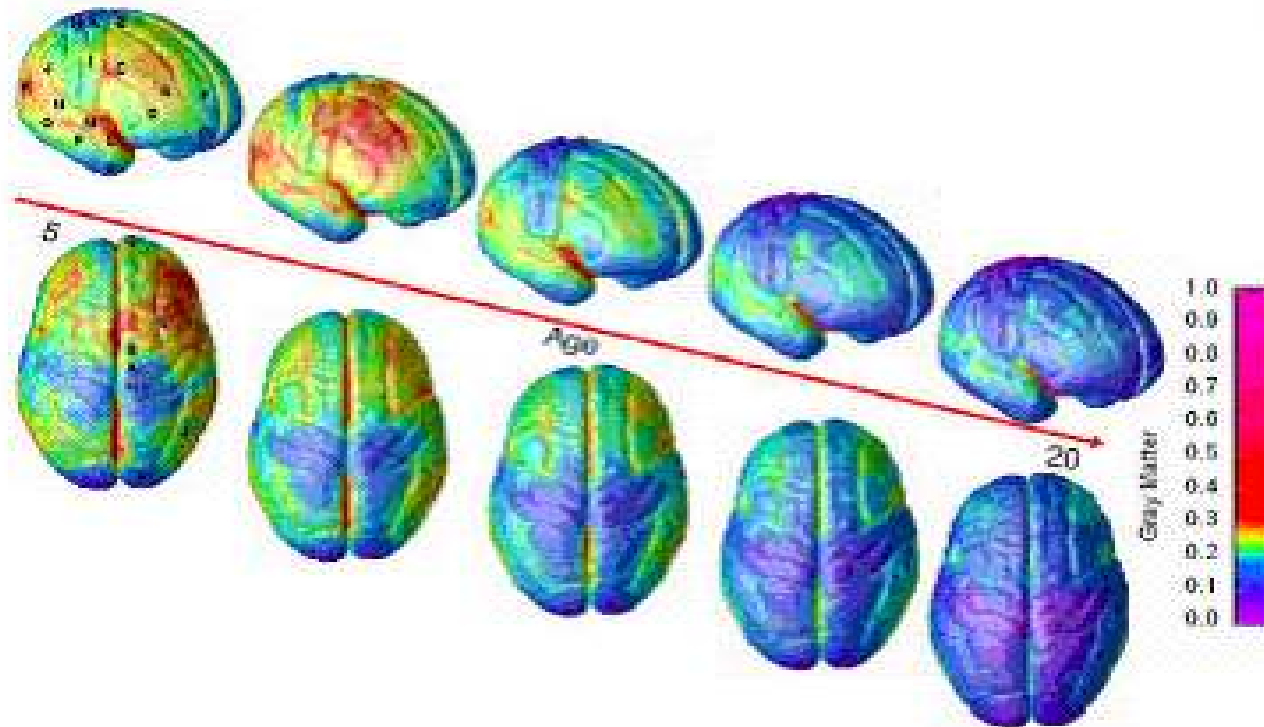
April 2014



The Adolescent brain – a work in progress

Giedd et al, 1999, Nature Neuroscience, 2, 861-863

<http://www.nimh.nih.gov/press/prbrainmaturing.cfm>

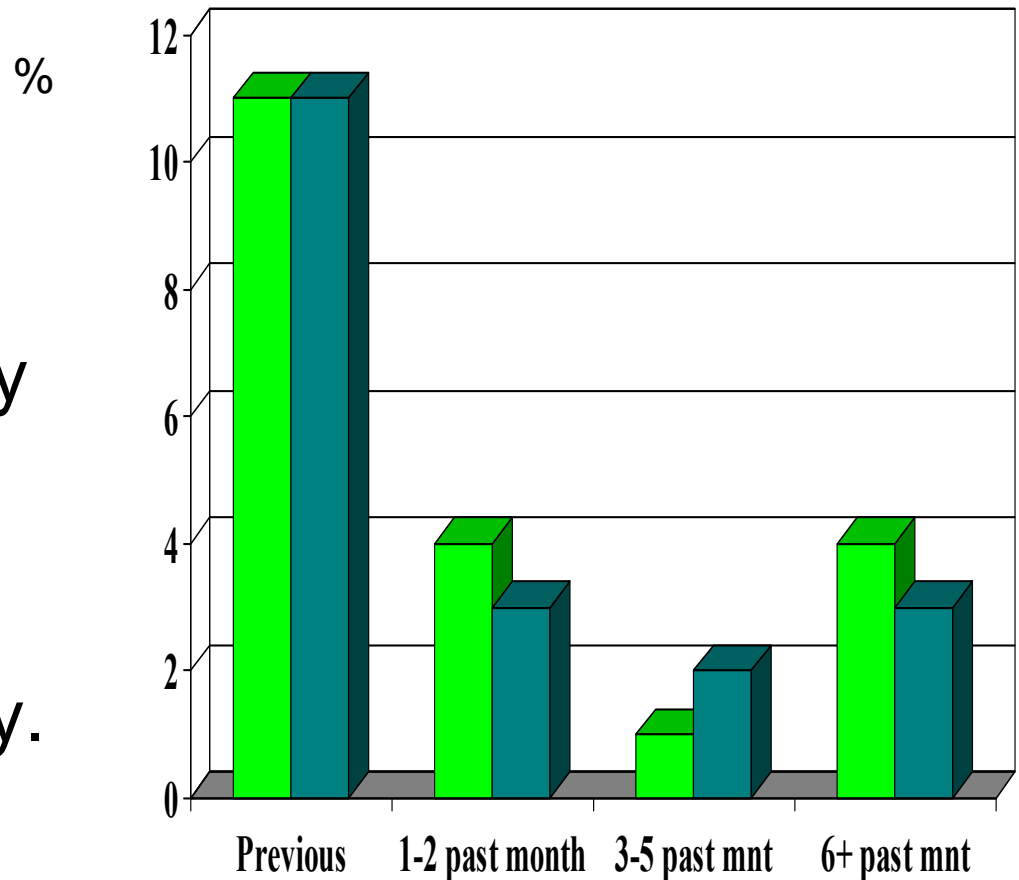


Red indicates more gray matter, blue less gray matter. Gray matter wanes in a back-to-front wave as the brain matures and neural connections are pruned. Areas performing more basic functions mature earlier; areas for higher order functions mature later. The prefrontal cortex, which handles reasoning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

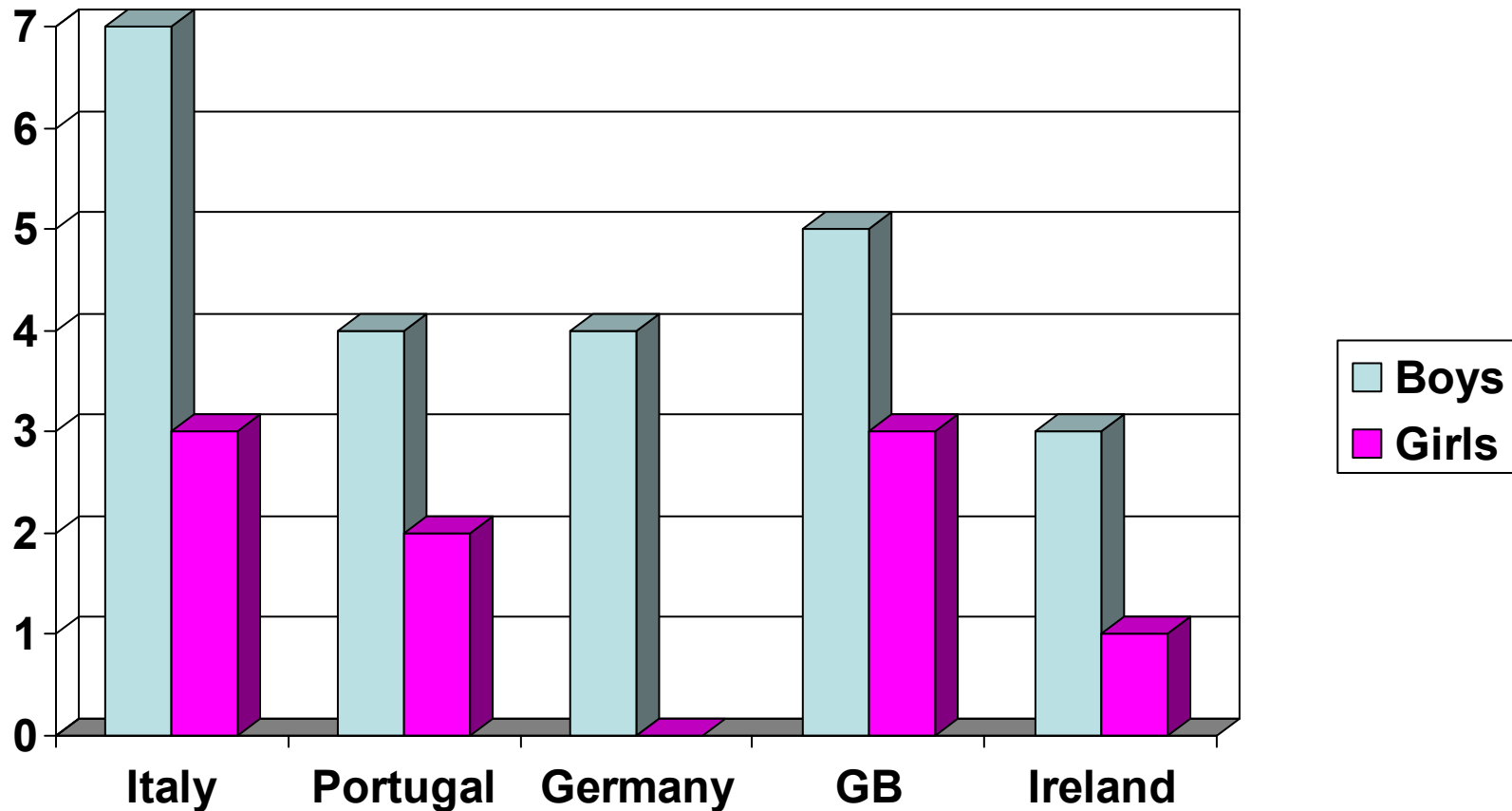


ESPAD 2007-2011

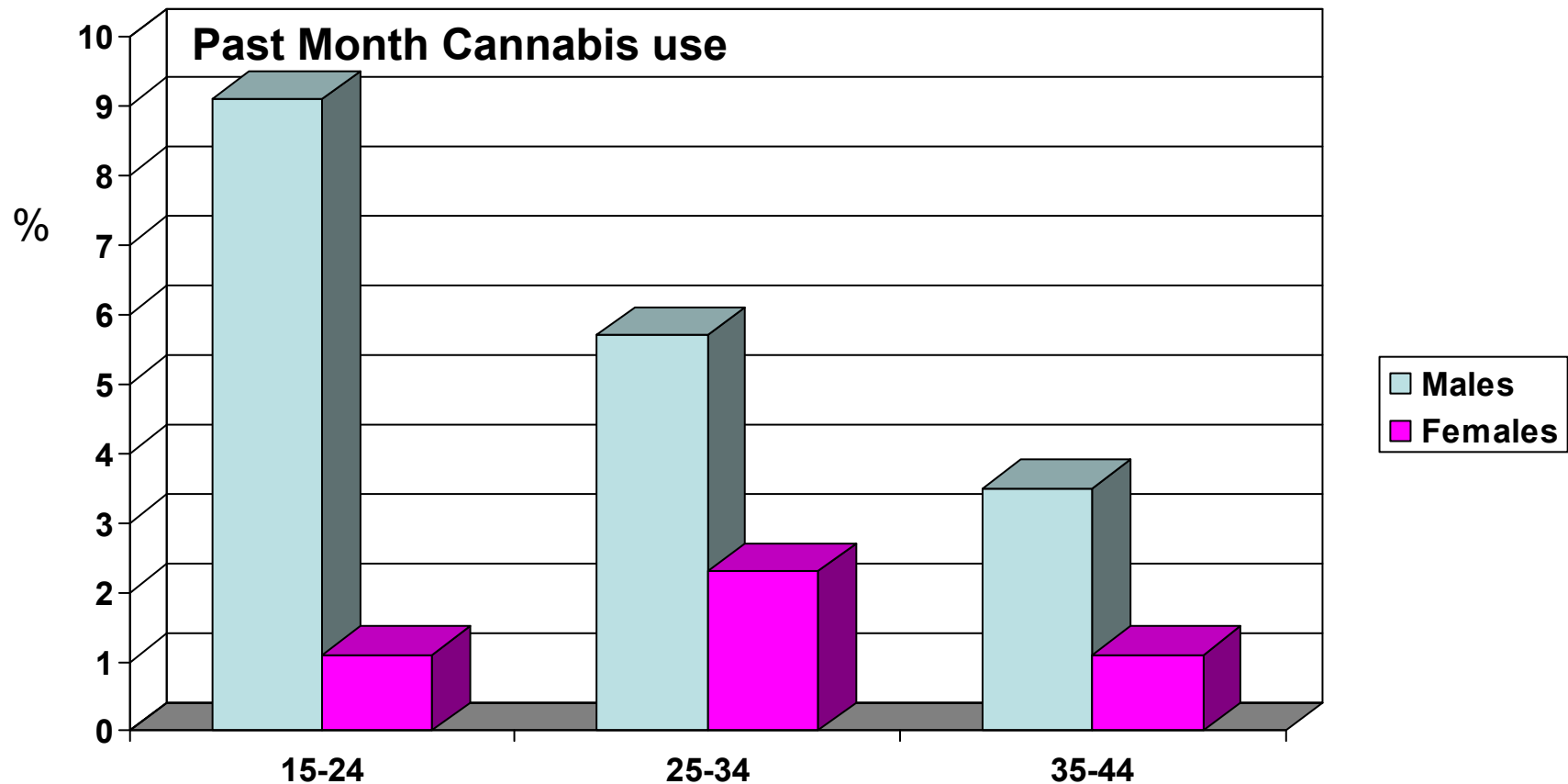
- 35% had opportunity to use weed
- 4% smoke weed by age 13yo, rising to 18% by 16th birthday.
- Rates of cannabis use are similar
 - In all SE Groups



Cannabis 6+ times past month

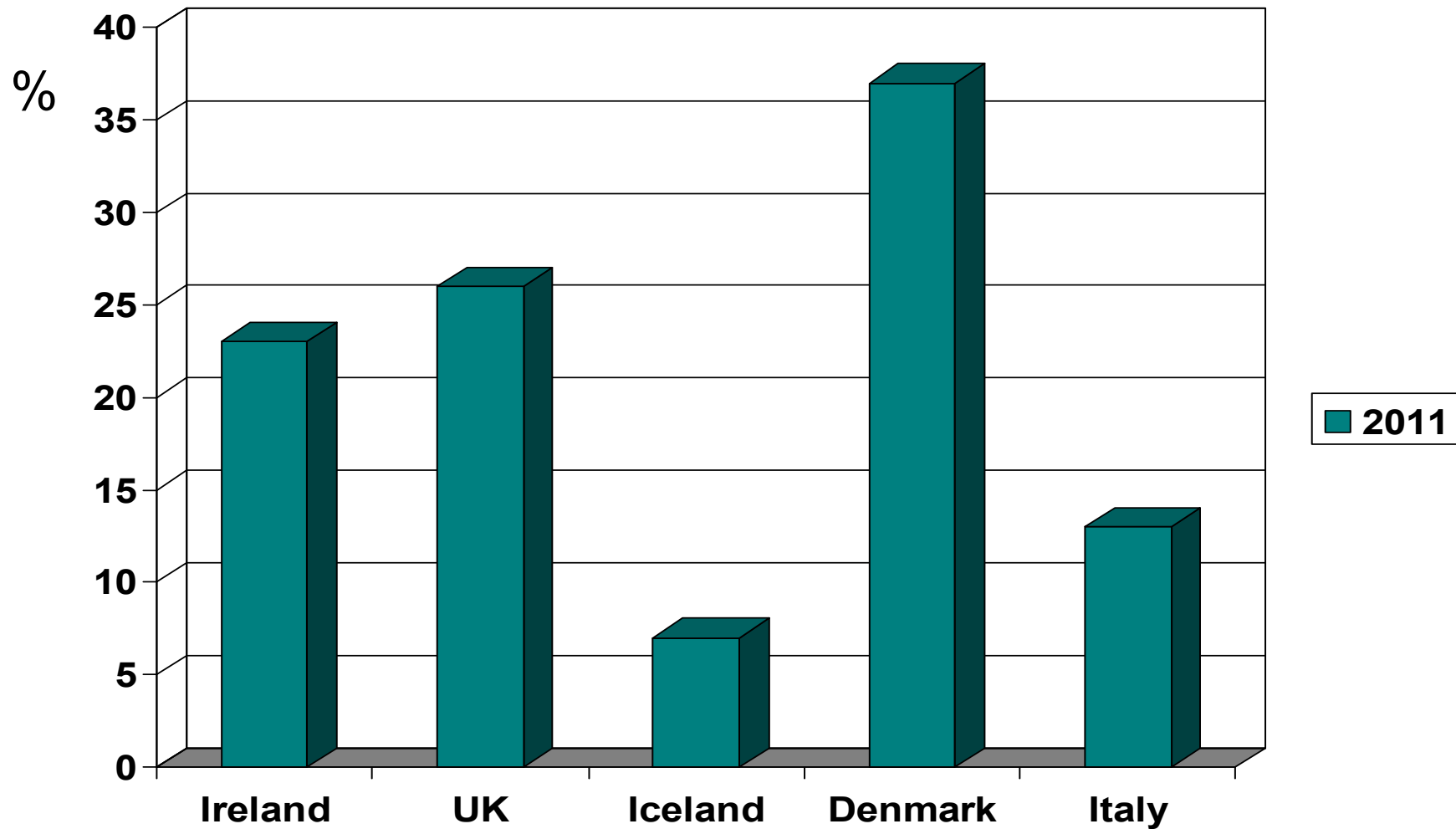


General Population Survey 2009-2010 (NACD)



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

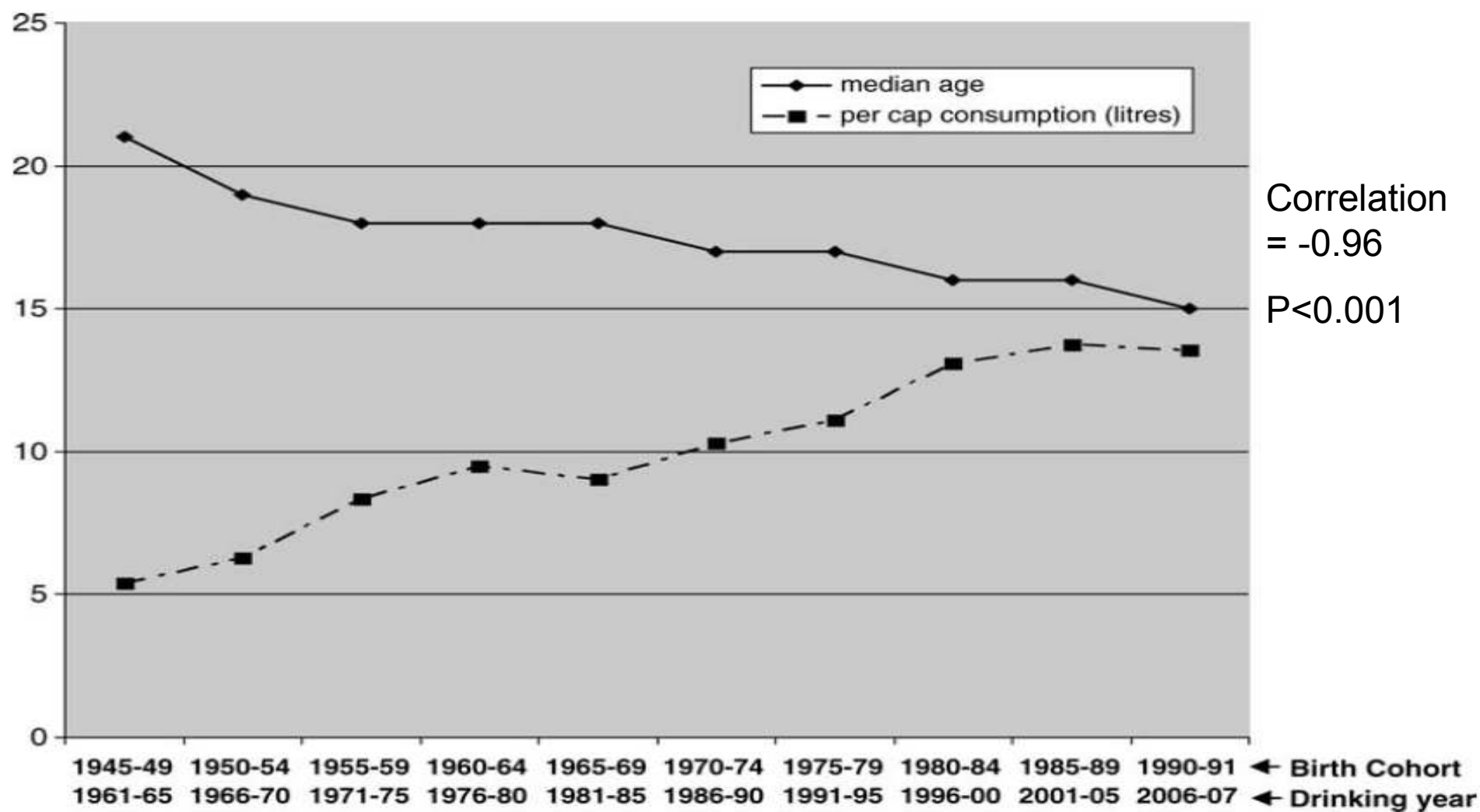
Drunk in the past month - ESPAD



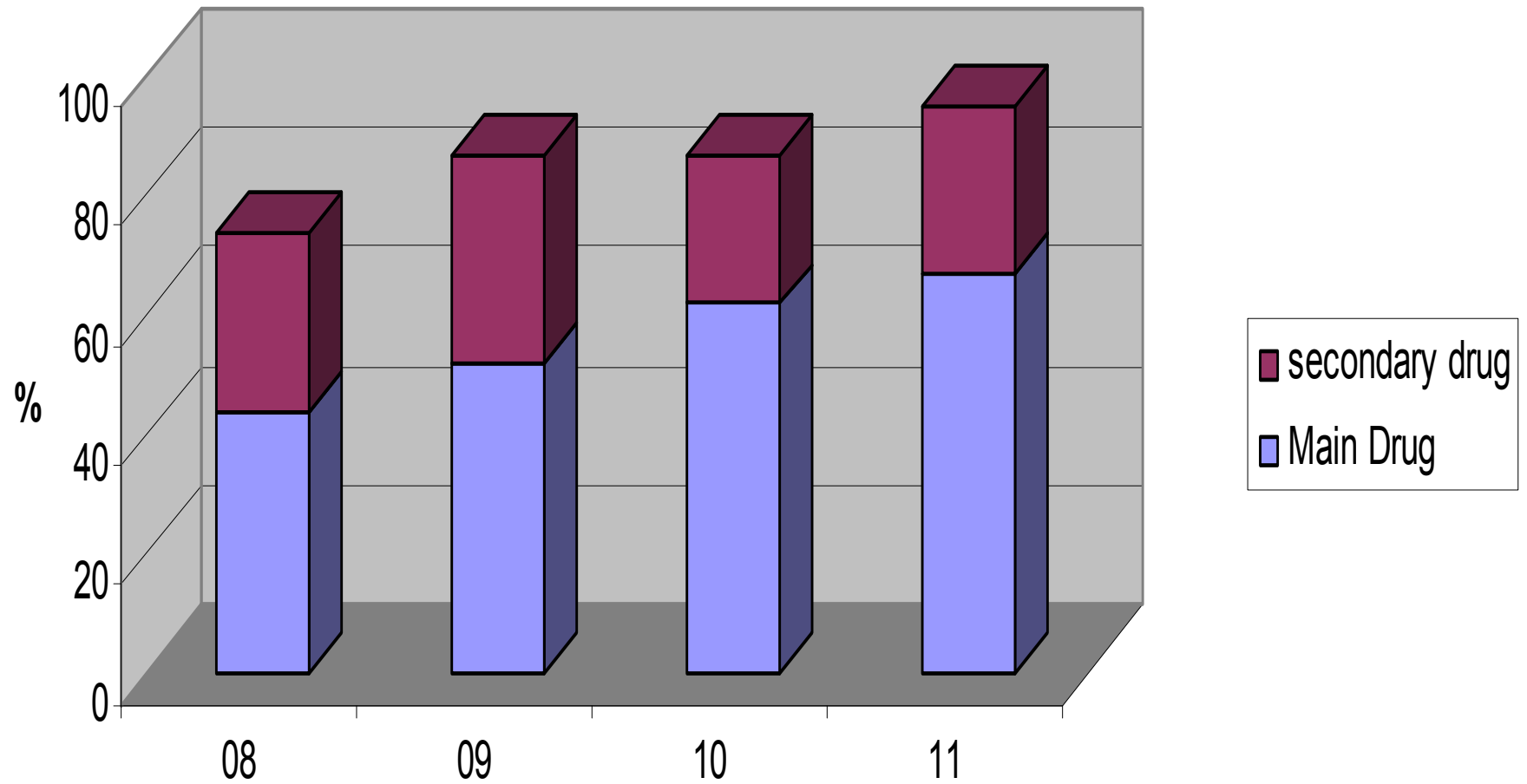
ORIGINAL ARTICLE

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

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



Role of Cannabis in YoDA clients 2008-2011



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)



Drugs/Alcohol/

MH Problem



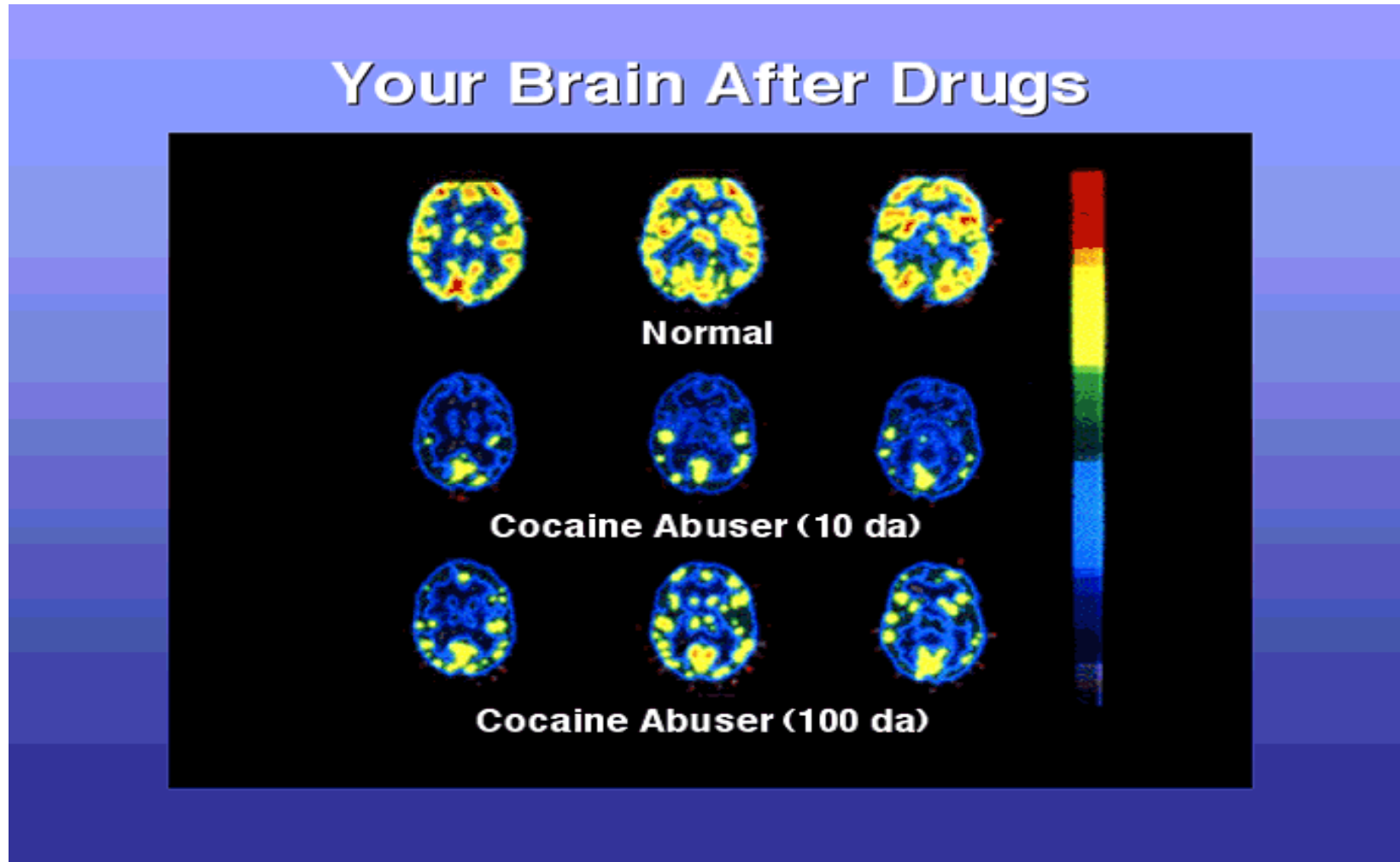
ADHD & Substance use

- SUD (22%) common in ADHD teens
- Treated ADHD in childhood reduces risk of later development of SUD



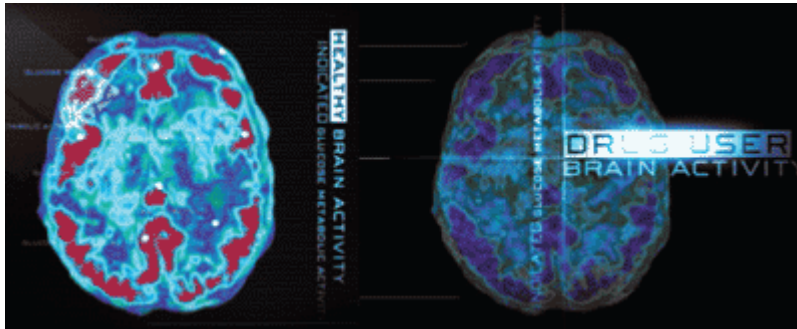
Kollins SH (2008) ADHD, Substance use disorders, and psychostimulant treatment. J Attent Disorders, 12; 115-125

Delayed recovery after abstinence



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





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



Contents lists available at SciVerse ScienceDirect

Drug and Alcohol Dependence

journal homepage: www.elsevier.com/locate/drugalcdep



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

Cannabis use causes damage to the memory

Jan Batties

IT'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 face-recognition 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 long-term 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.

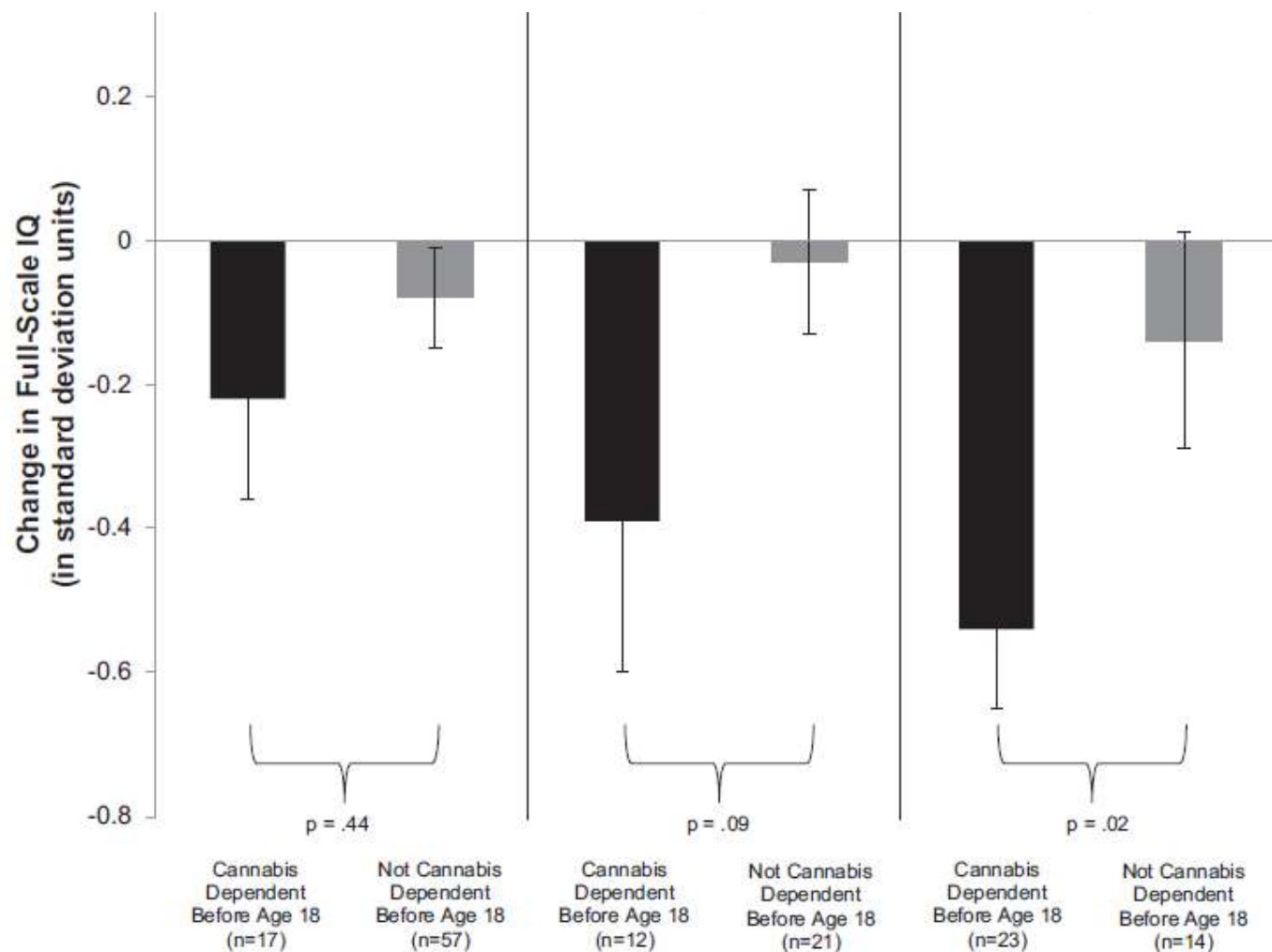
In one experiment they were shown a series of pictures of faces bearing names and were later shown them in random order, without names, and asked to identify them. There were "significant differences" between the cannabis users and non-smokers on learning performance and percentage recall consistency. Non-smokers were able to recall almost 80% of names compared with just over 50% for cannabis users.

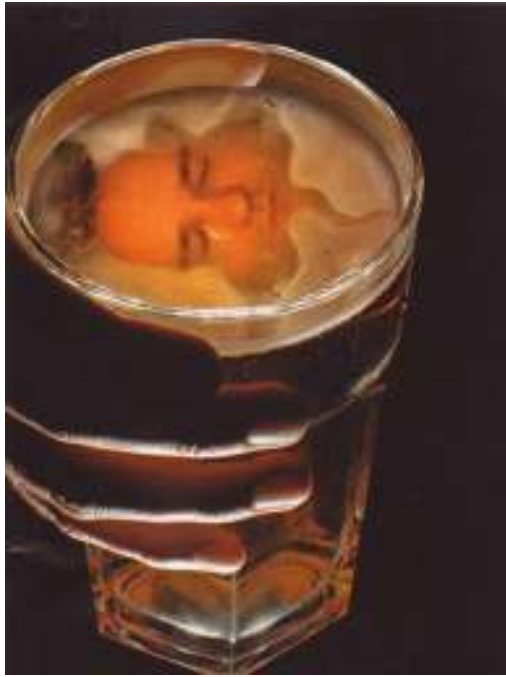
"The differences appear to be consistent with recent findings indicating deficits in learning and memory, supporting the notion that cannabis may impair learning, short- and long-term

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

Mental Health Foundation



Alcohol more dangerous than cocaine or heroin

A new study found alcohol was the most dangerous of 20 legal and illegal

health, and loss of relationships. Economic cost contributed "heavily" to the ratings of alcohol, heroin, tobacco and cannabis, the study found. Alcohol costs...



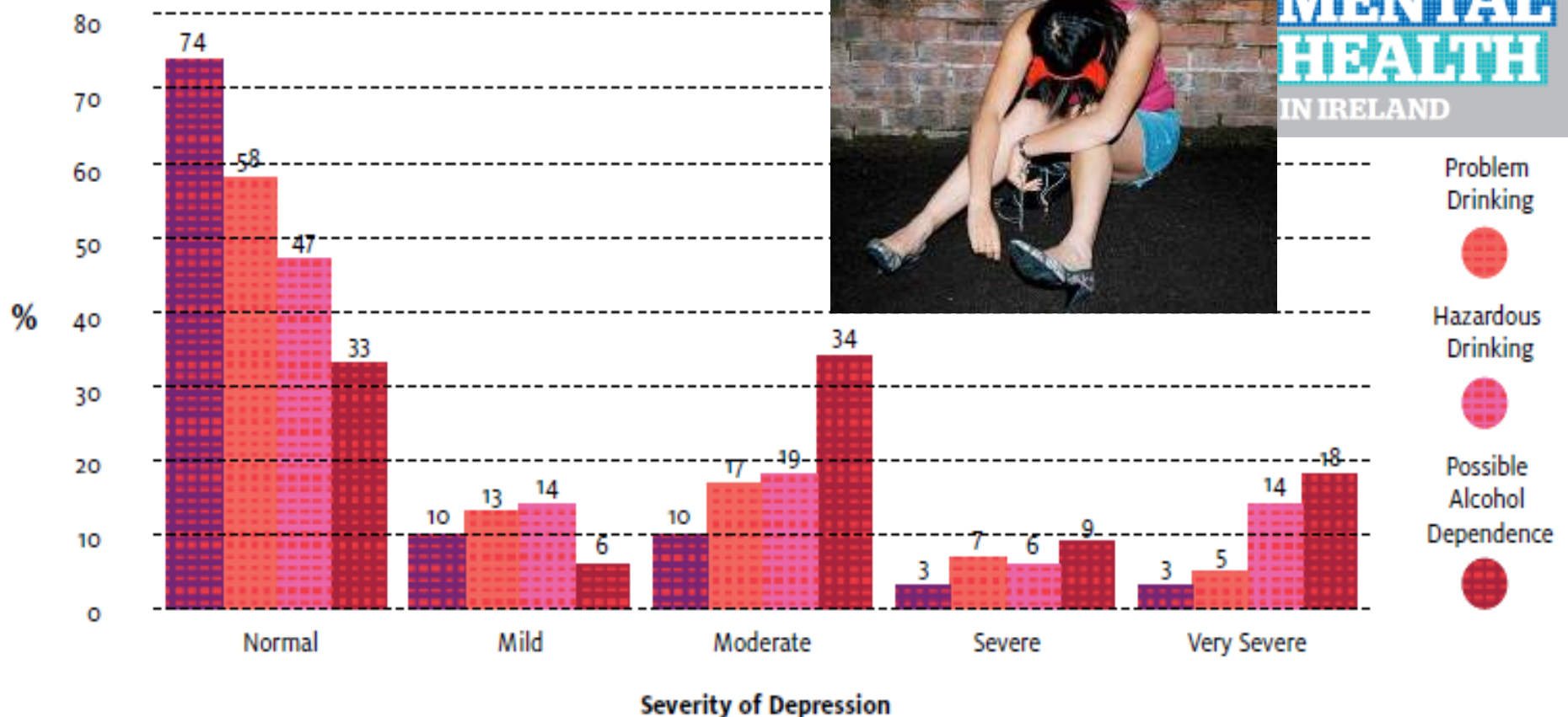
Party like there's no tomorrow: one of many tributes to Amy Winehouse

Teens, Alcohol and Depression

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Figure 4.28: Depressive symptoms by alcohol behaviour



Teens, Alcohol and Anxiety

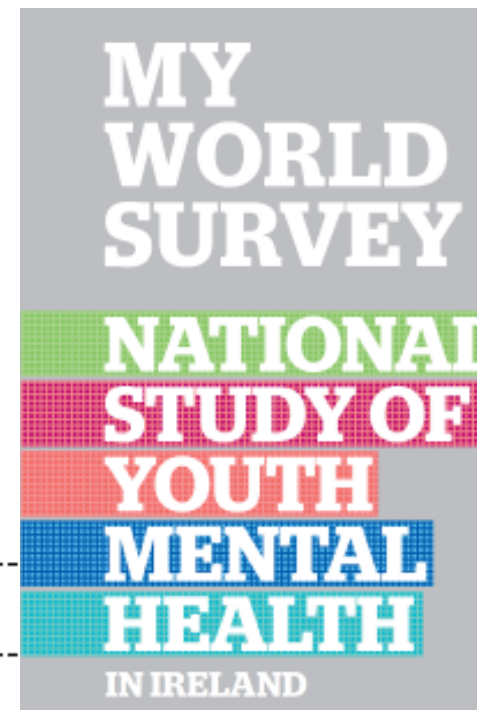
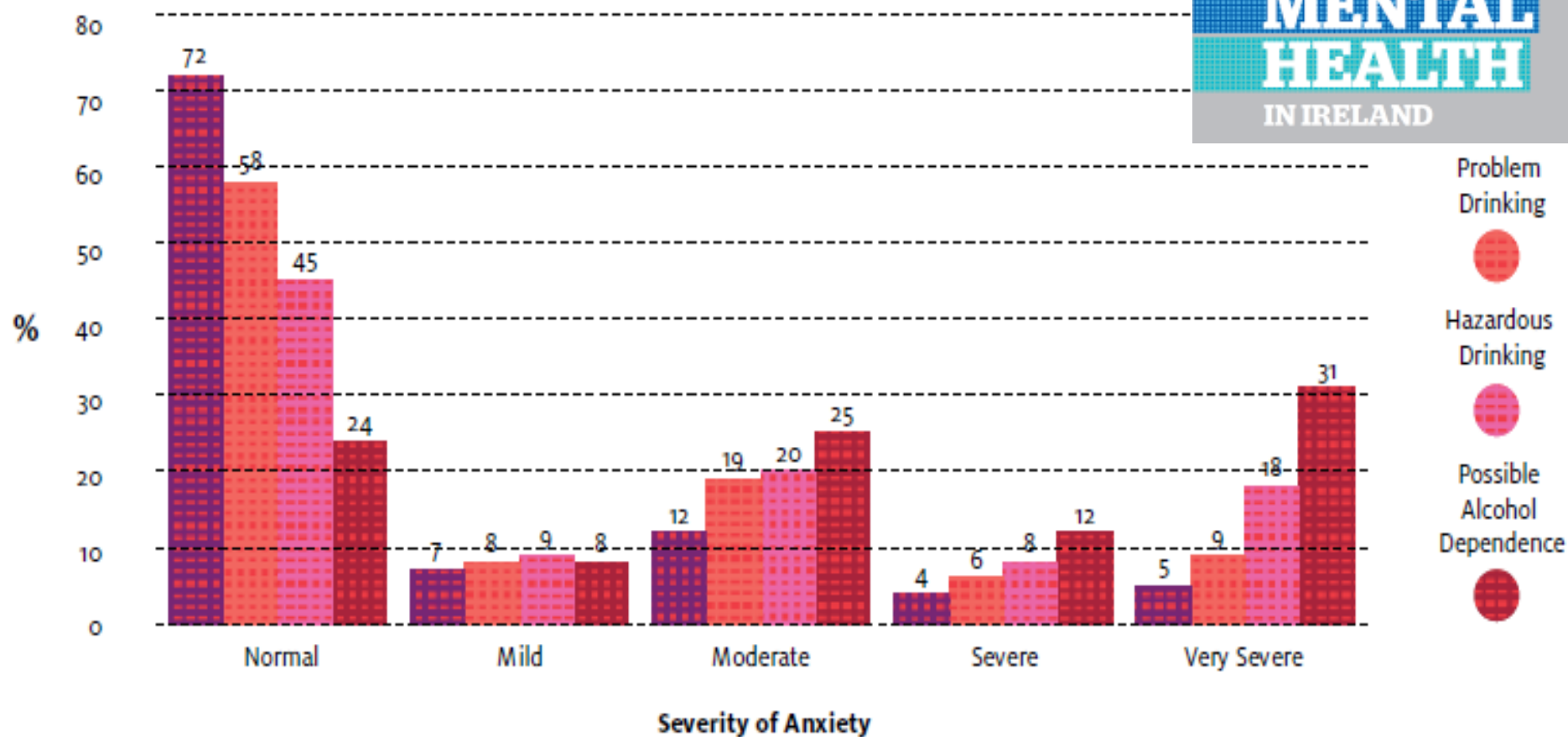


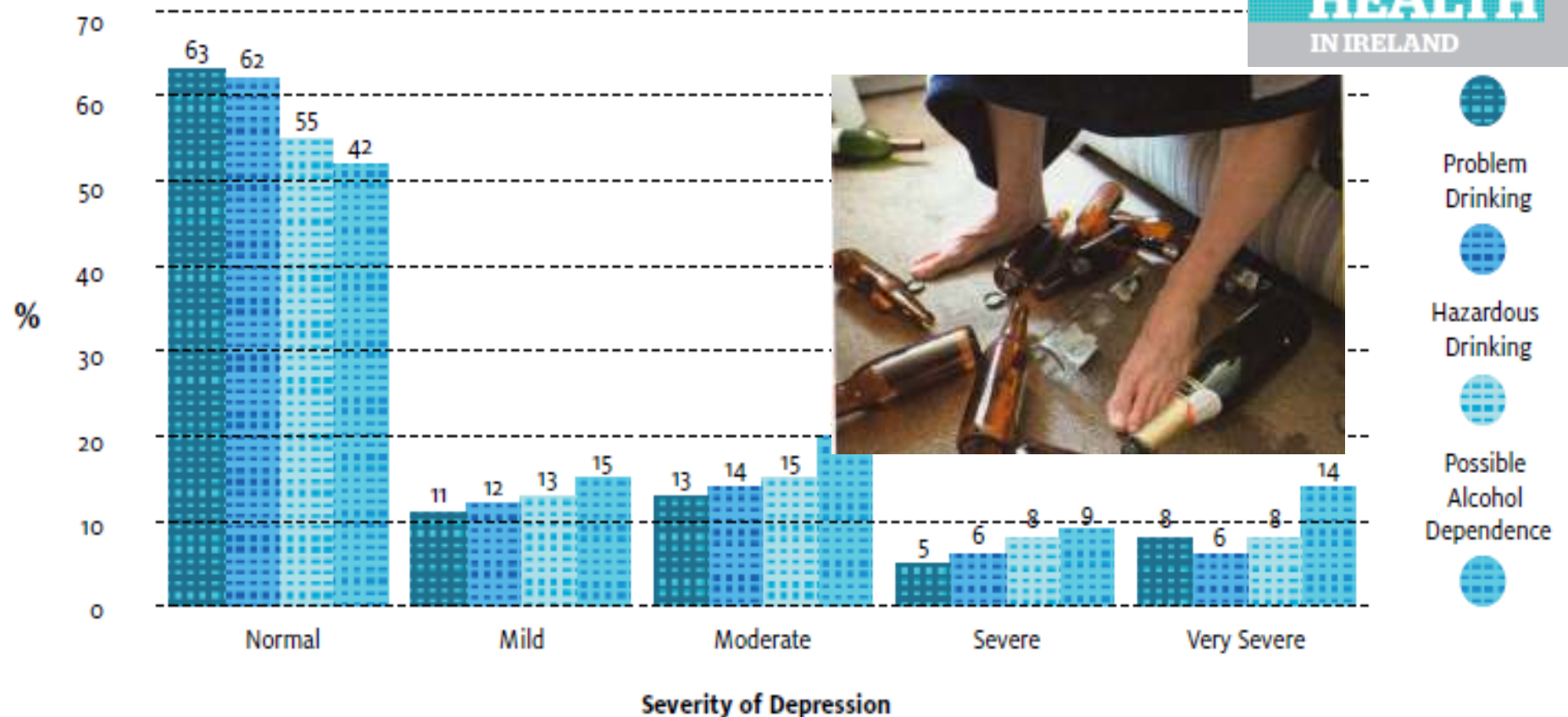
Figure 4.29: Symptoms of anxiety by alcohol behaviour



Young Adults, Alcohol and Depression



Figure 6.8: Depressive symptoms by alcohol behaviour



Learning which shoulder to cry on.....

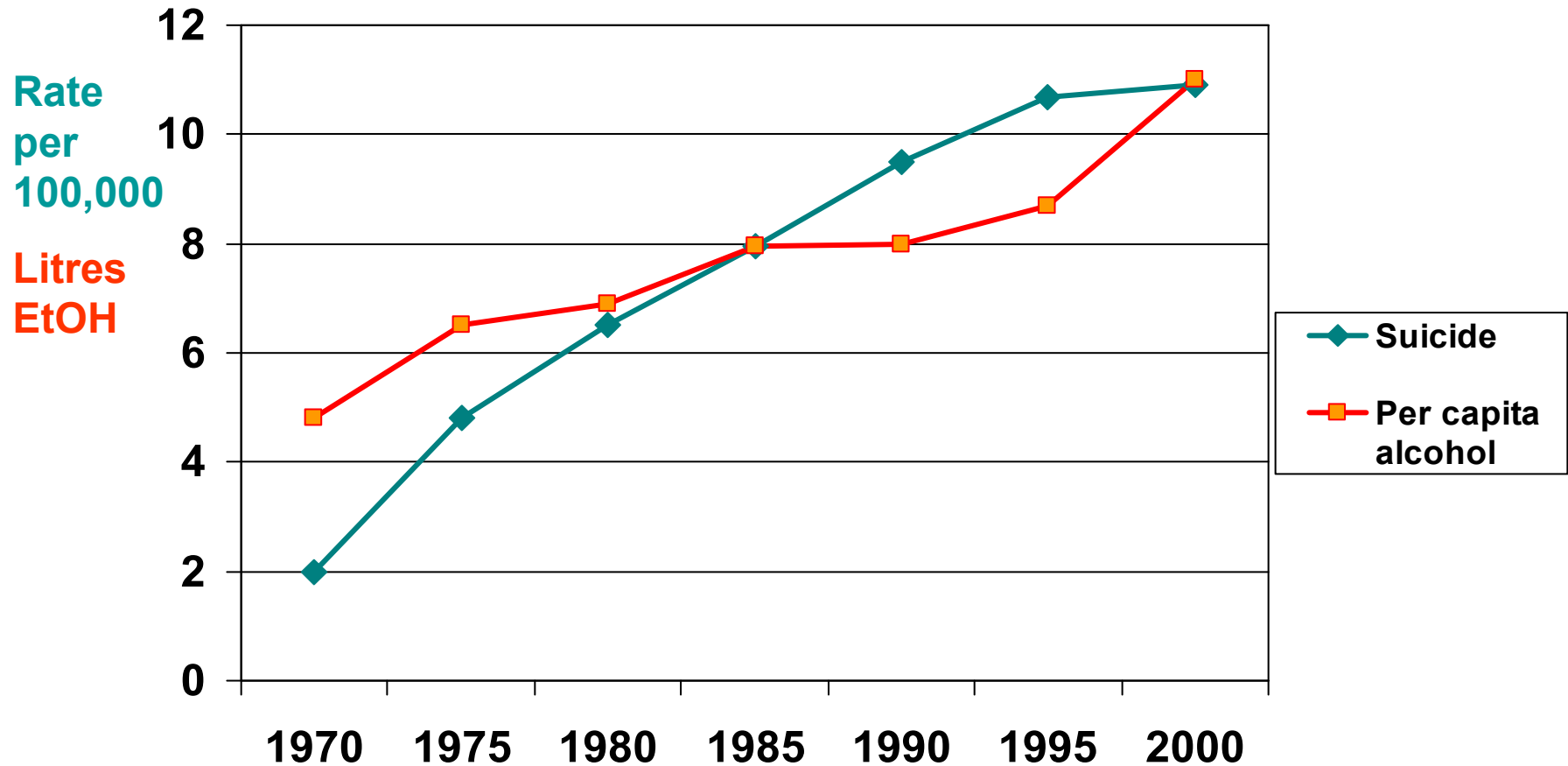


DSH



“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.

Alcohol a major factor in failure of rape cases

Many alleged victims unable
to recall details of events

SPECIAL REPORT
● Sexual assault

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

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DARIN COULTER
Legal Affairs Editor

months in the office of the DPP. The
figure was also lower than in the
earlier research, and again may
probably explain the low level
of sexual violence, who are

A MANTRIA...
of Public...
does not

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



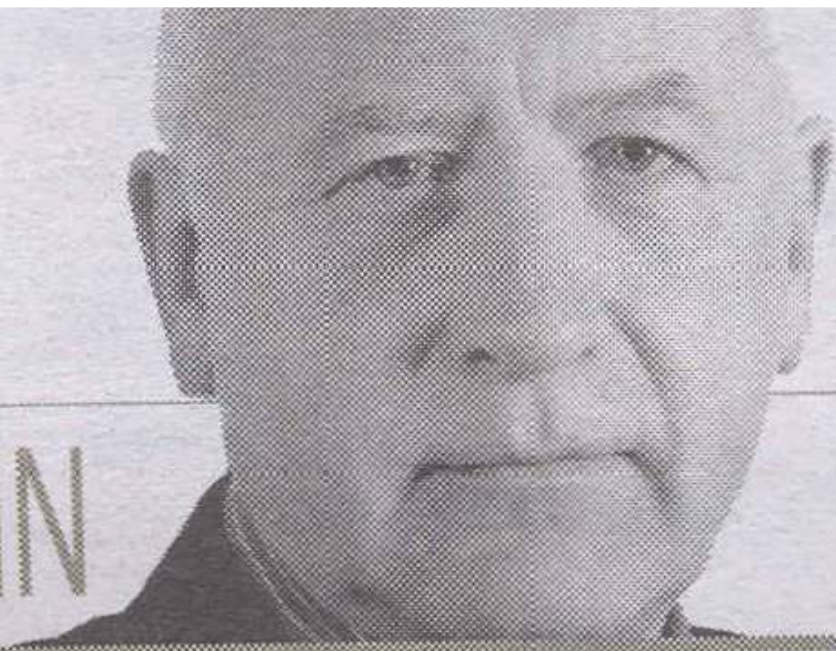
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Alcohol as a 'Date-Rape' Drug



THAT'S MEN

PADRAIG O'MORAIN

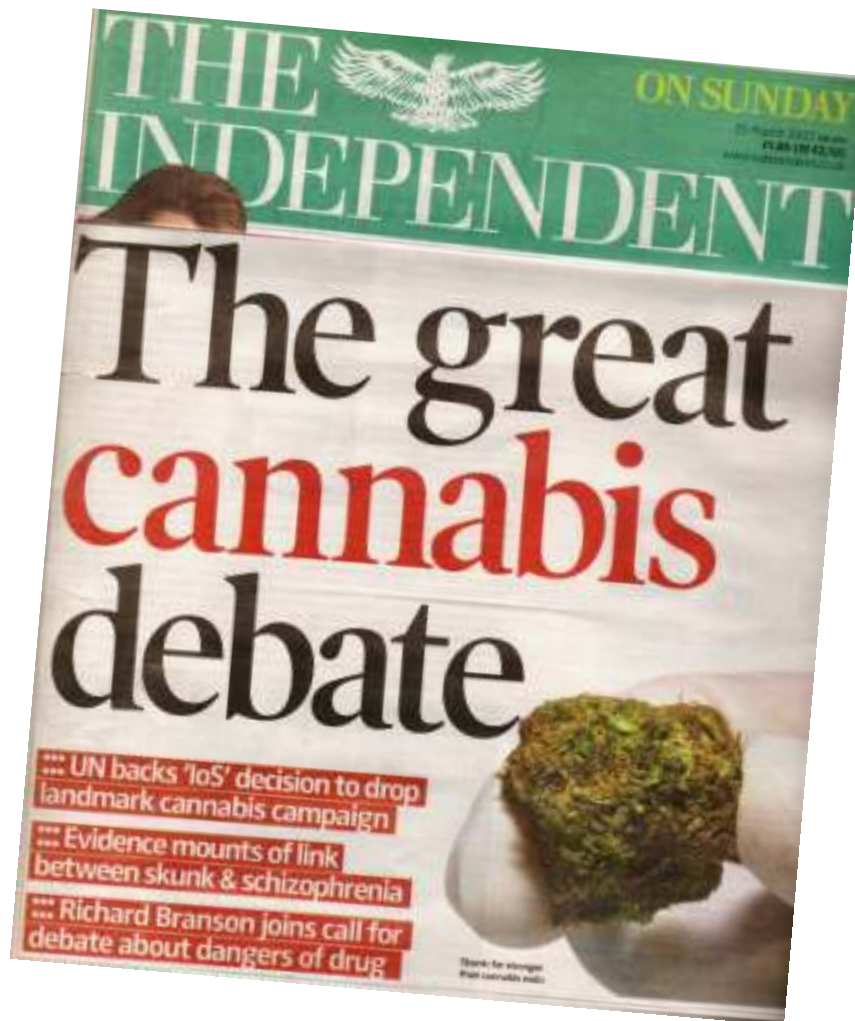


Parents need not be cowed by violent teens

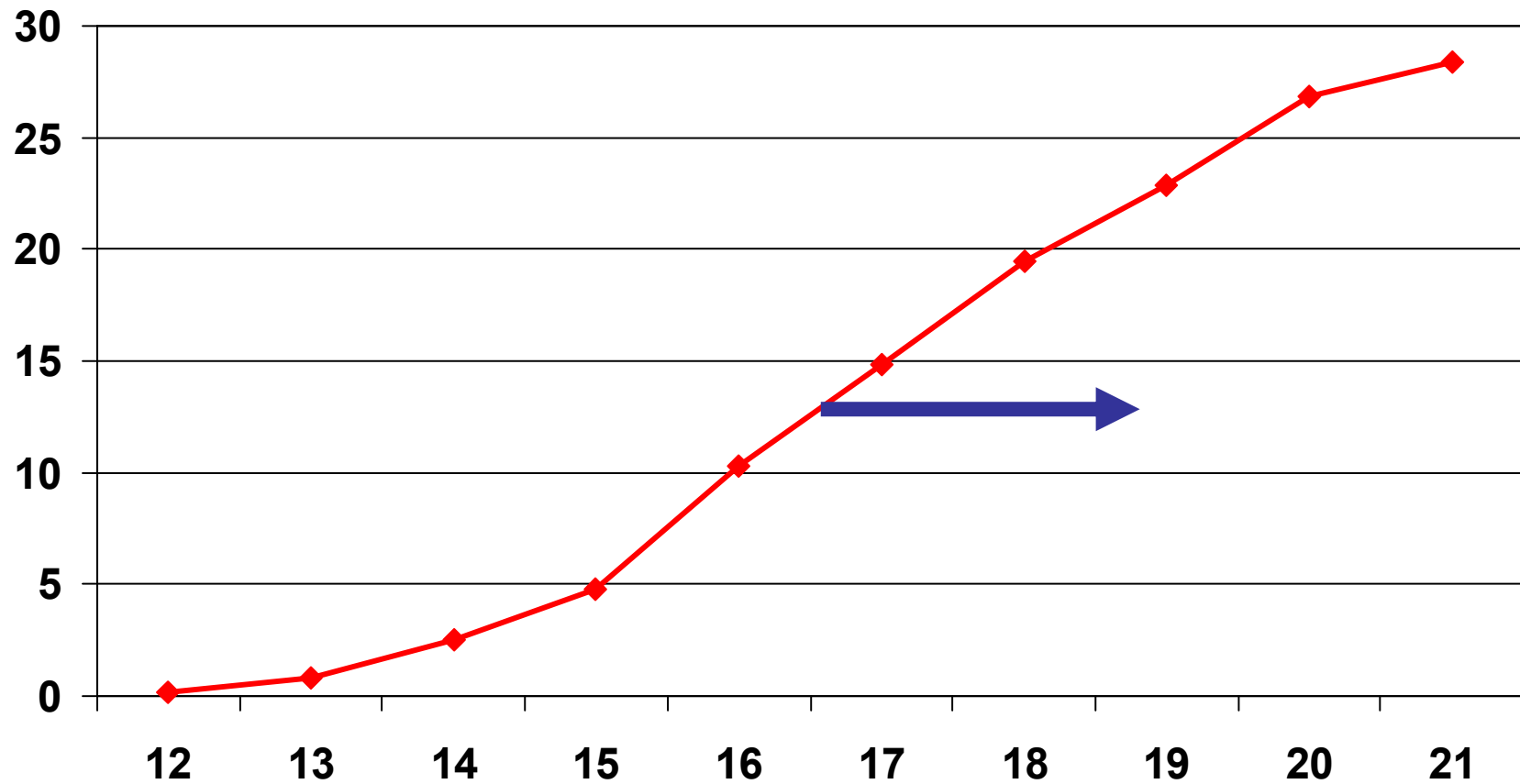
THE ABUSE of parents by their adolescent children is not talked about much – and understandably so. This is one domestic problem parents don't want to broadcast to the neighbours or the wider family. For that reason, we don't

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

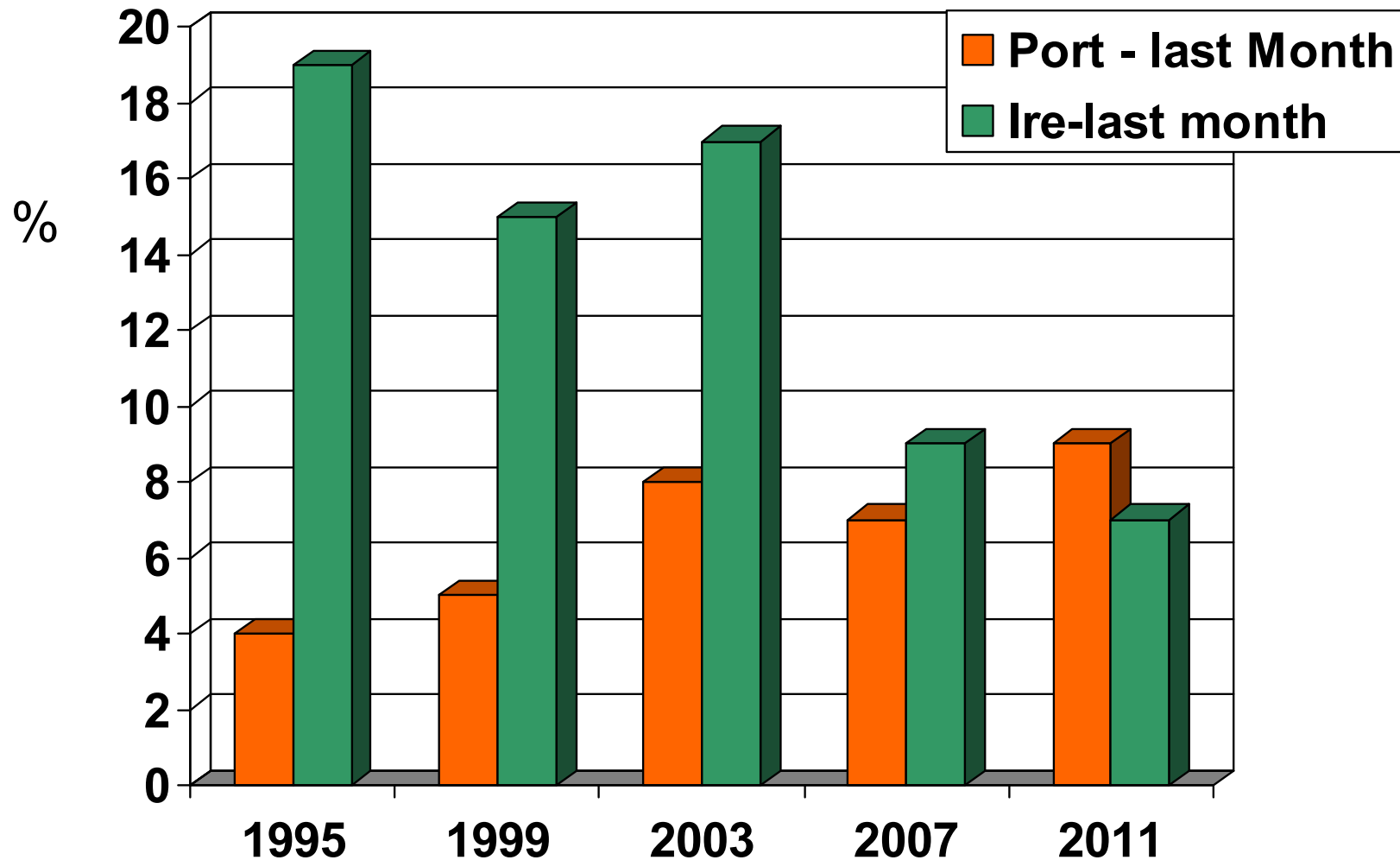


Age of onset cannabis use

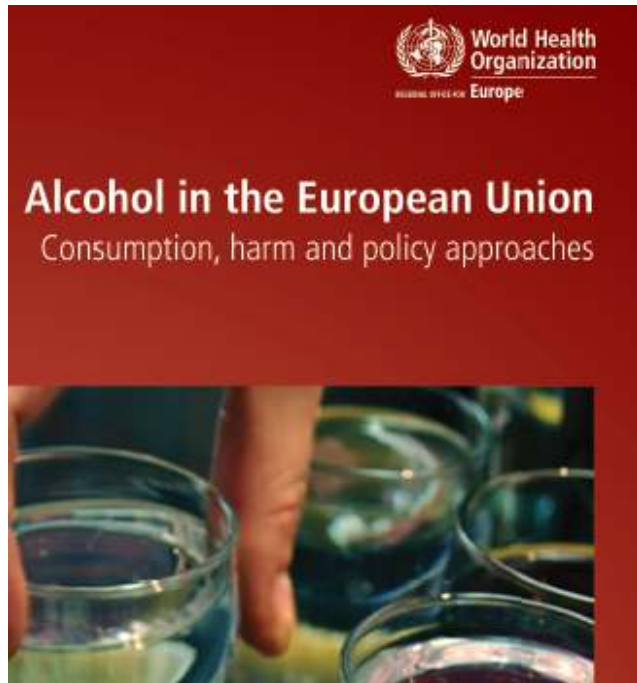


Rates of cannabis use – Ireland & Portugal

1995 to 2011 ESPAD survey results



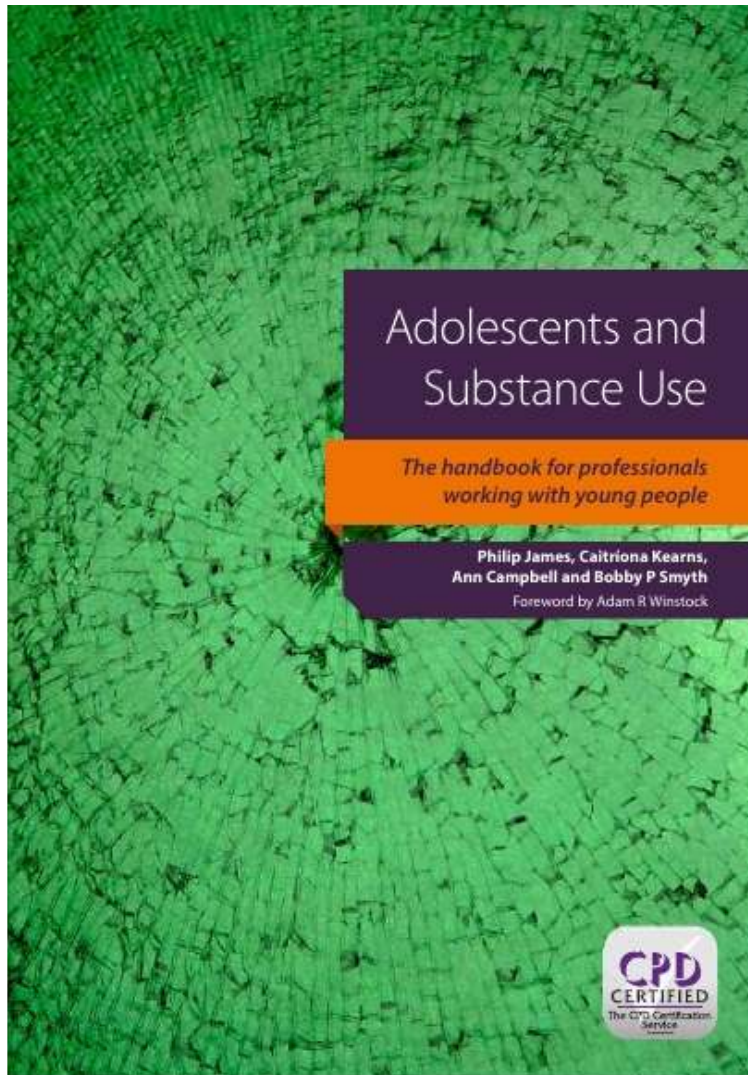




- Increase cost
- Reduce availability
- Curtail promotion



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-and-substance-use-handbook-professionals-working-young-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