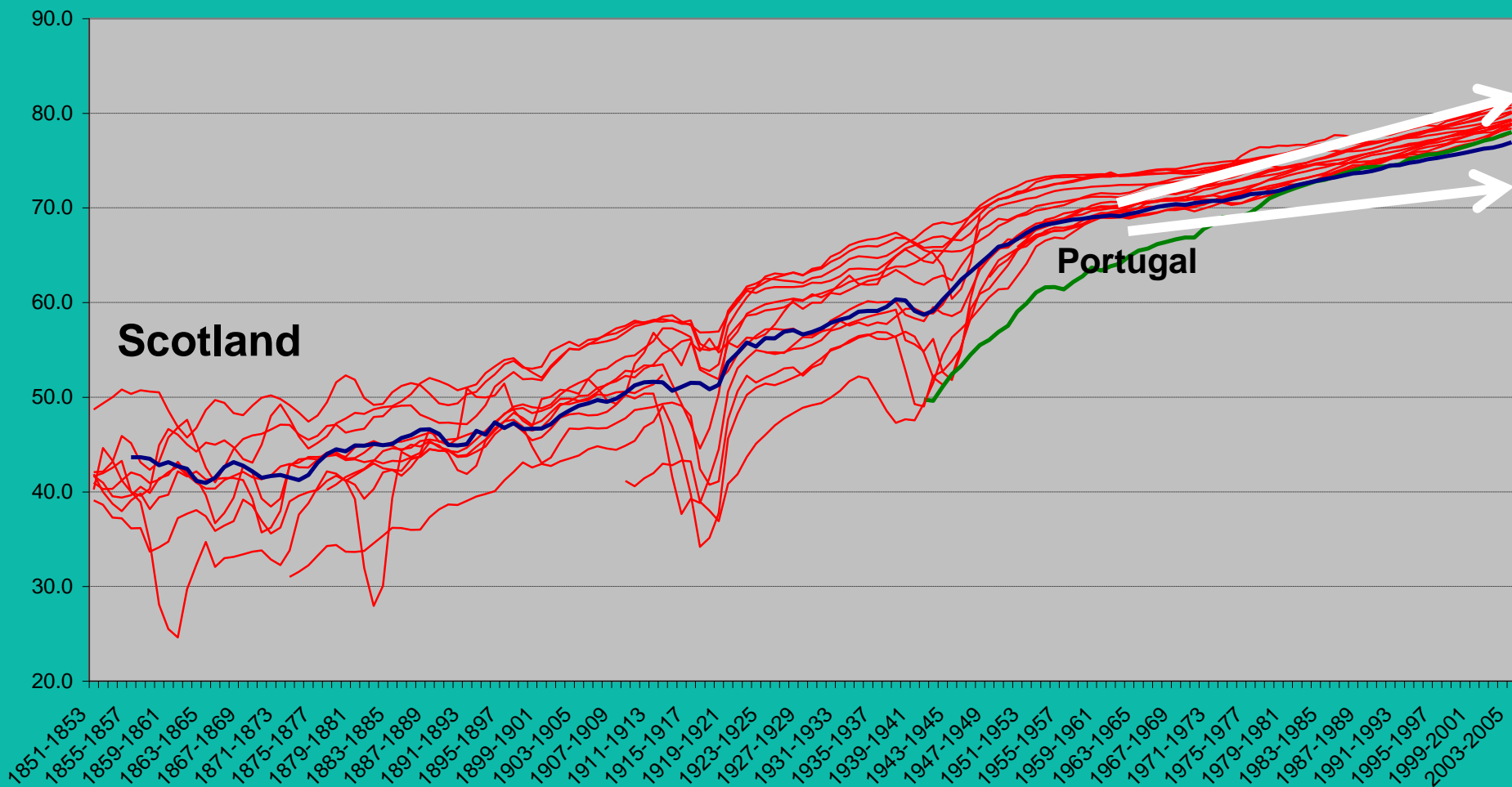


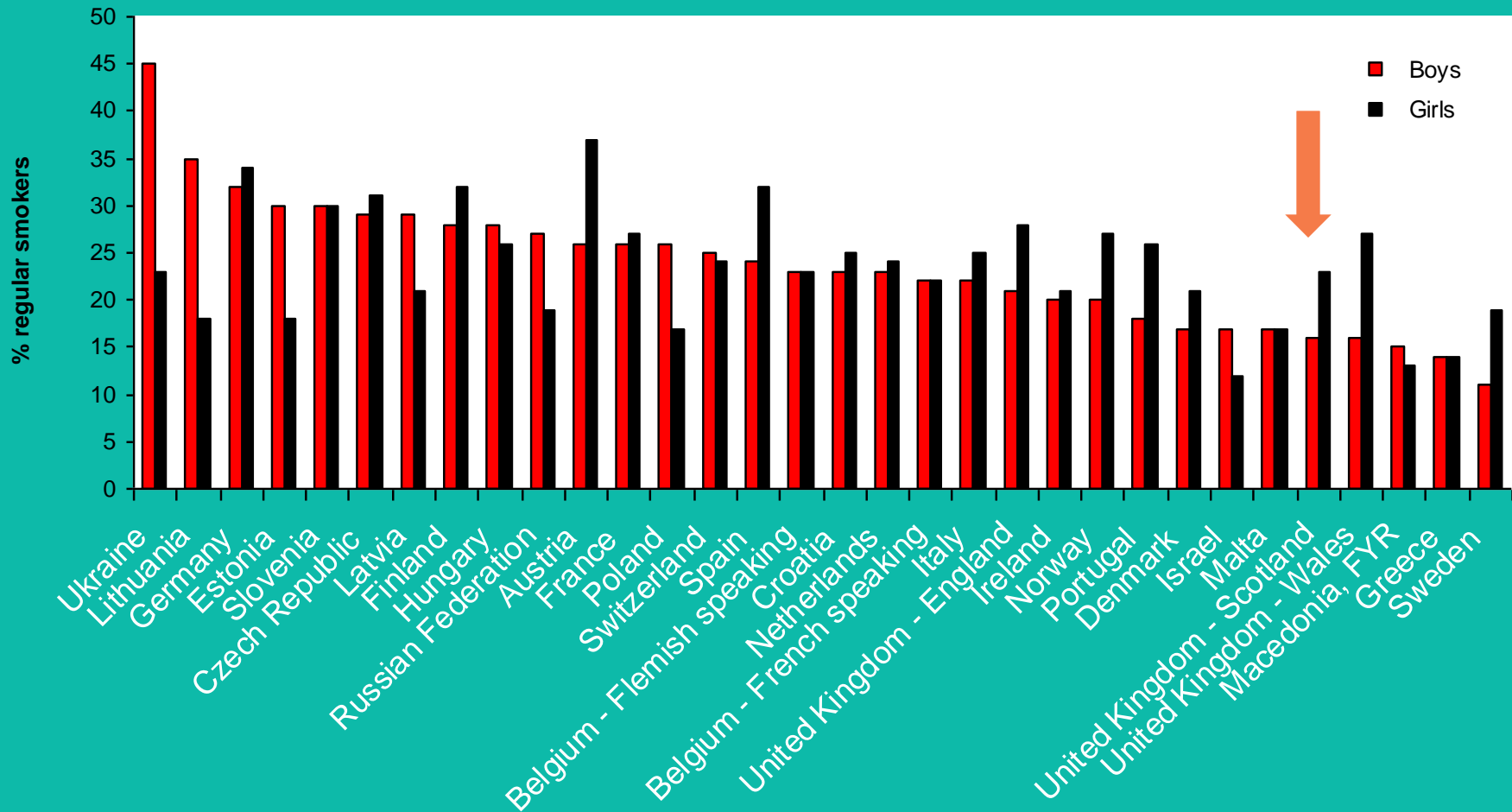
Life expectancy trends

Life expectancy: Scotland & other Western European Countries, 1851-2005

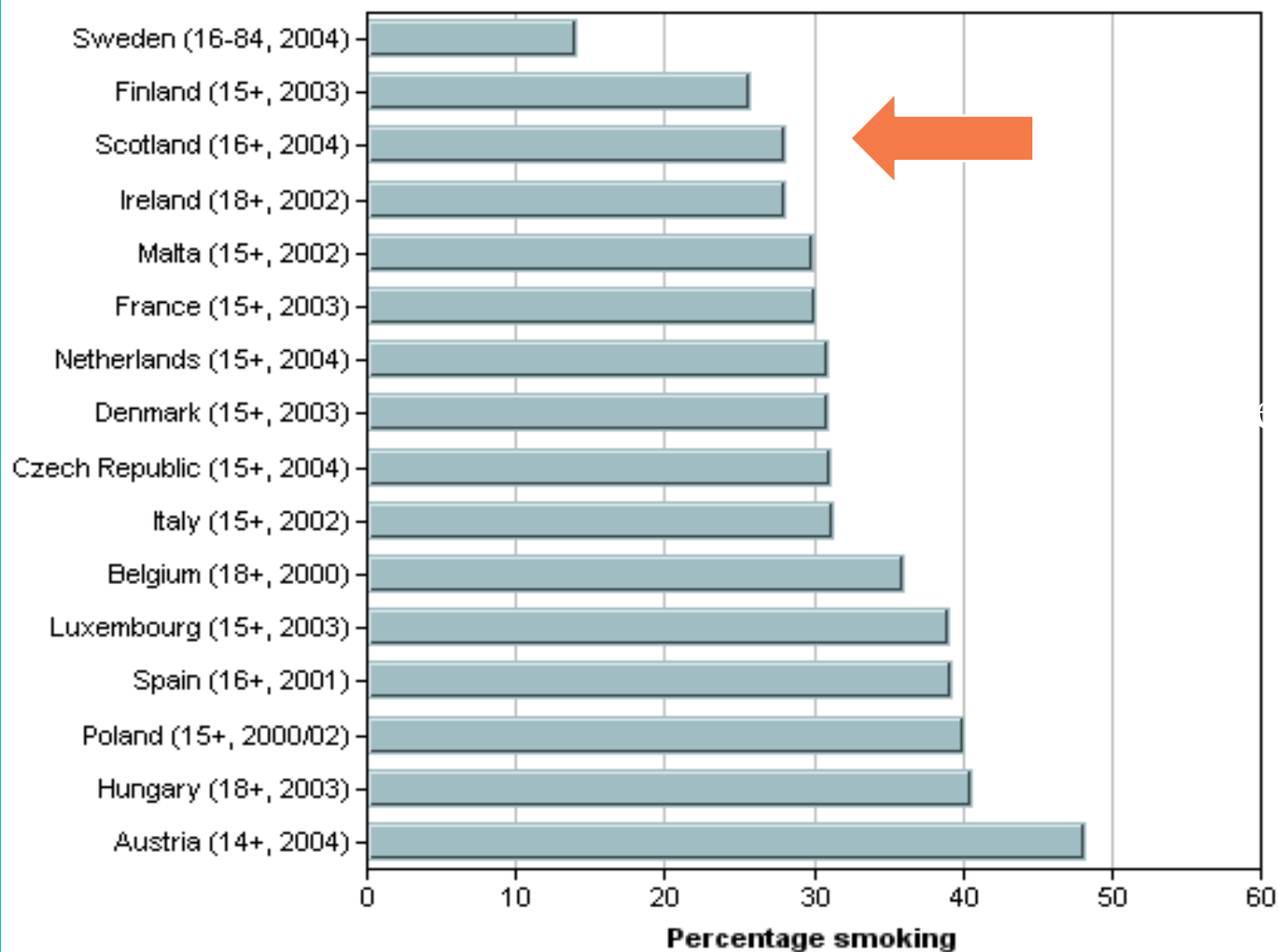
Source: Human Mortality Database



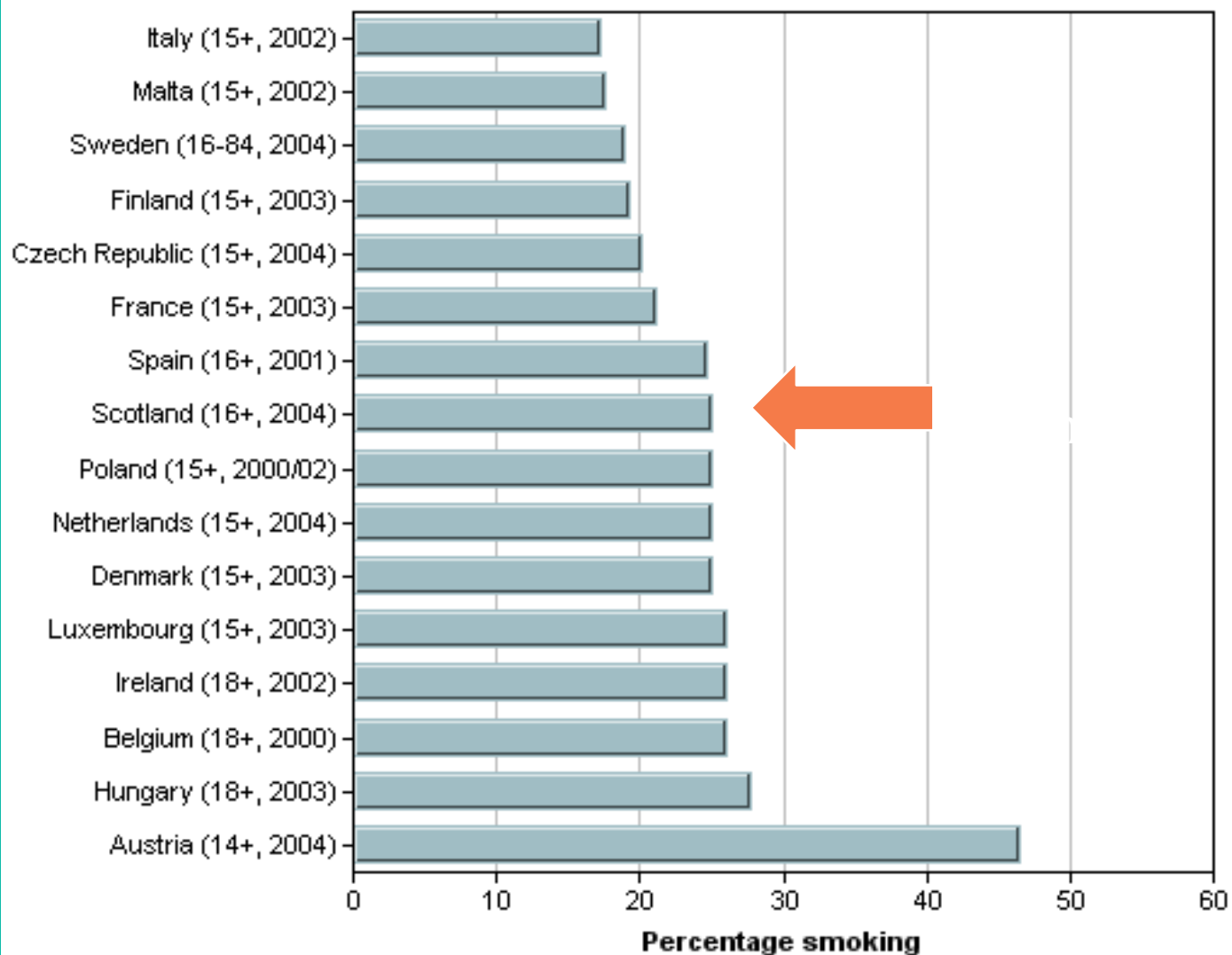
Prevalence of smoking by country, in 15 year olds by sex, 2000/01, Europe



Smoking prevalence - Males

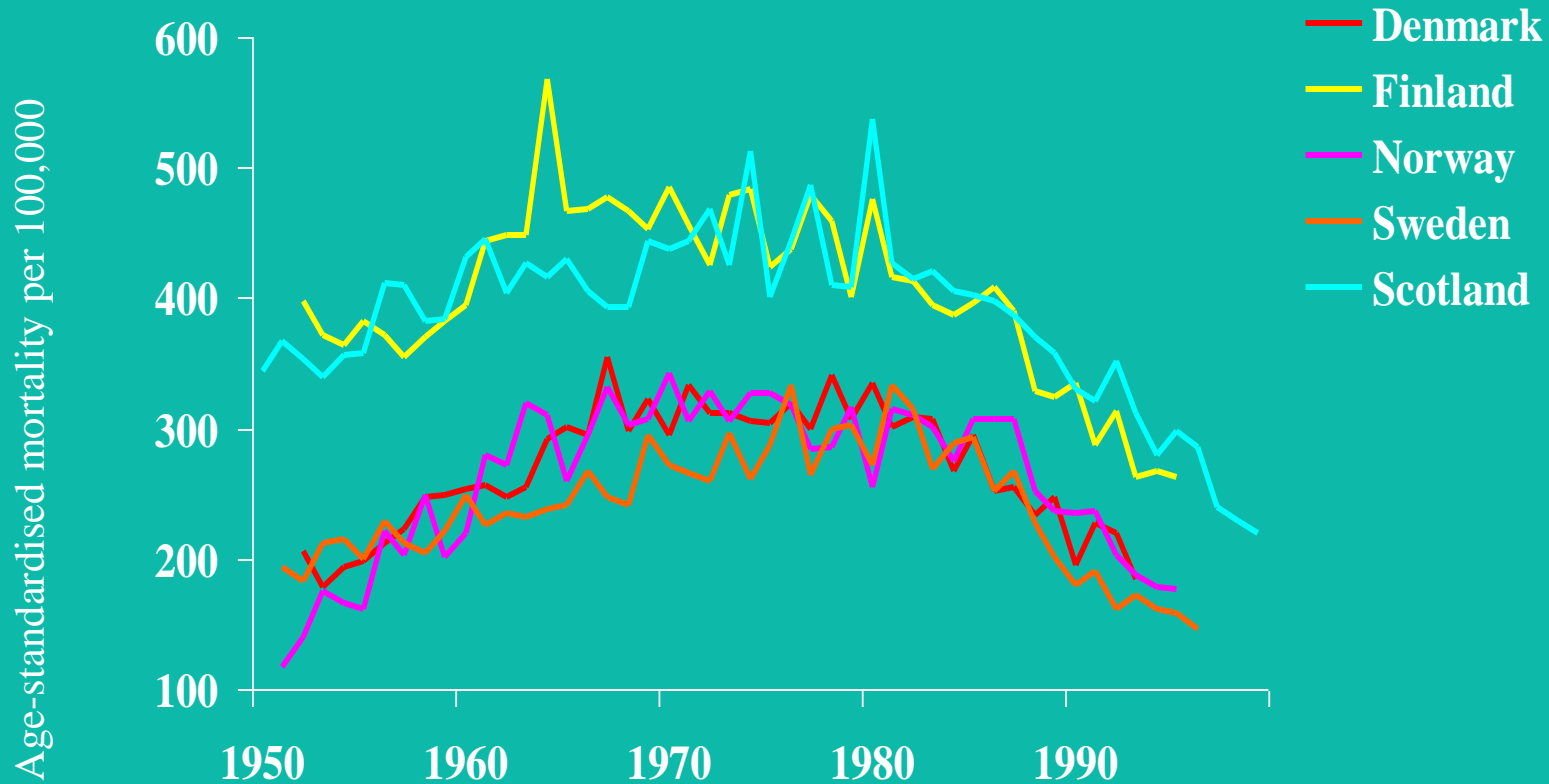


Smoking prevalence - Females



Coronary heart disease mortality

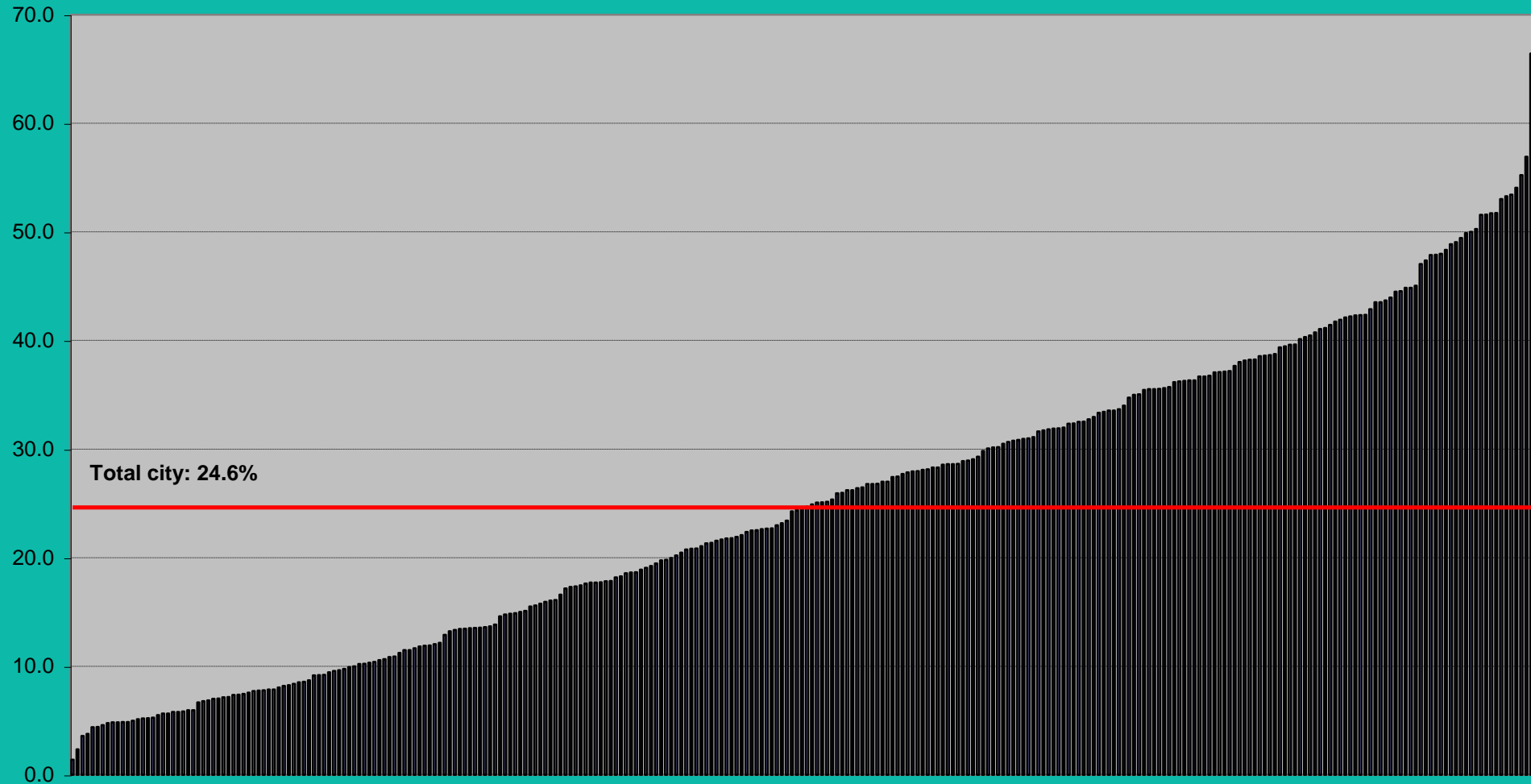
Men aged 15-74 years



Income deprivation - Liverpool

Liverpool LSOAs: income deprivation distribution

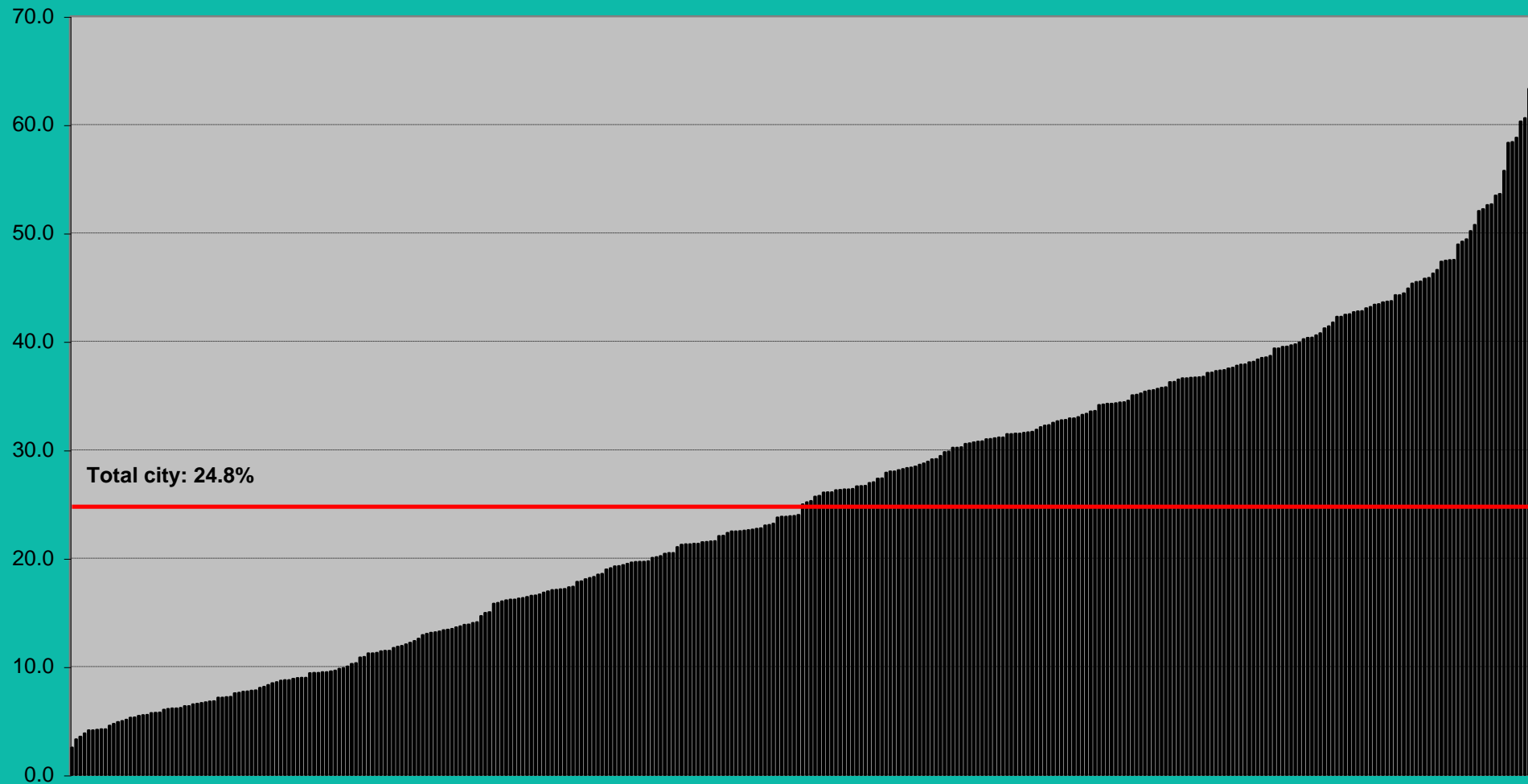
Source: DWP



Income deprivation - Glasgow

Glasgow merged DZs: income deprivation distribution

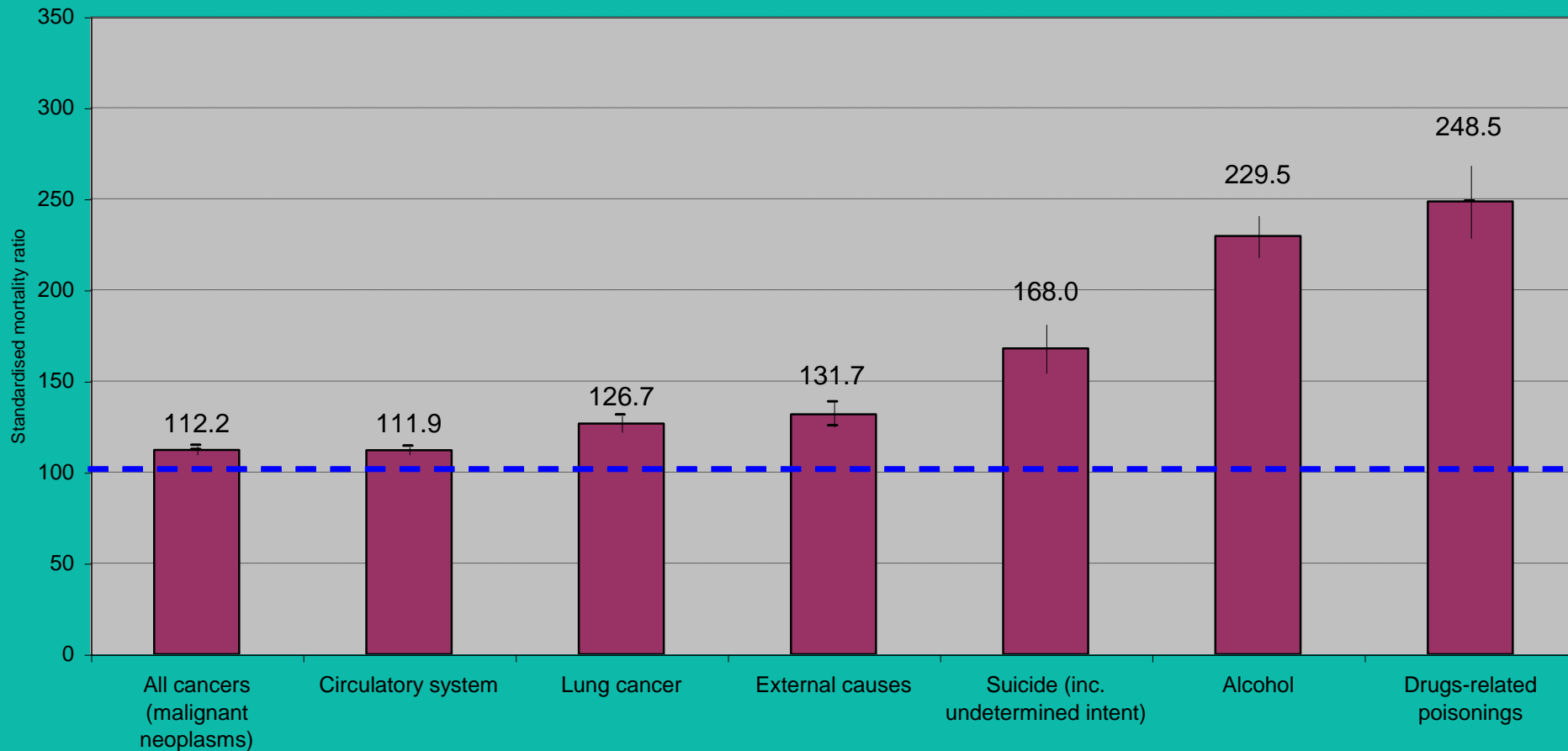
Source: GCPH, based on SIMD/DWP data



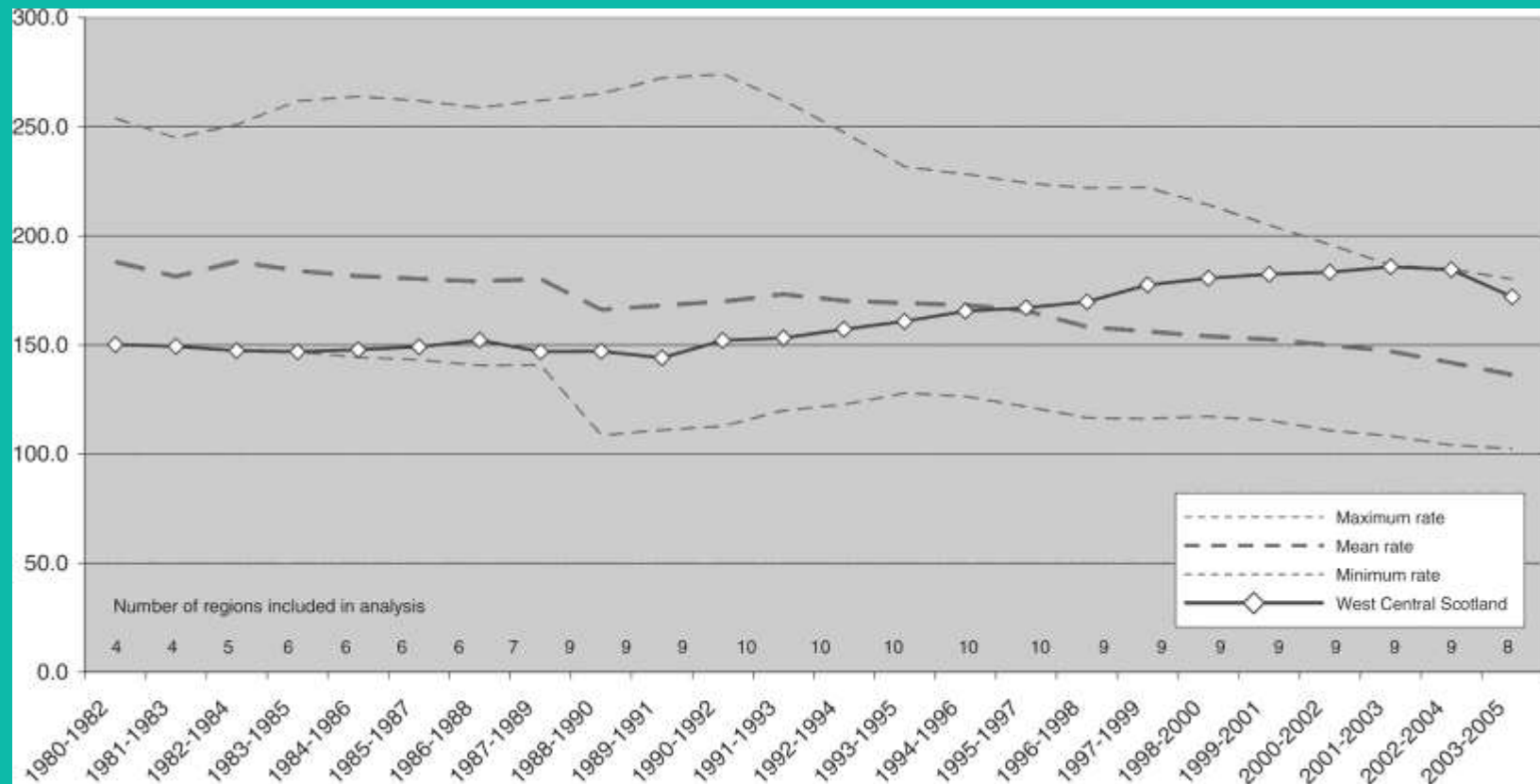
Standardised mortality rates by cause, all ages: Glasgow relative to Liverpool & Manchester

All ages, both sexes: cause-specific standardised mortality ratios 2003-07, Glasgow relative to Liverpool & Manchester, standardised by age, sex and deprivation decile

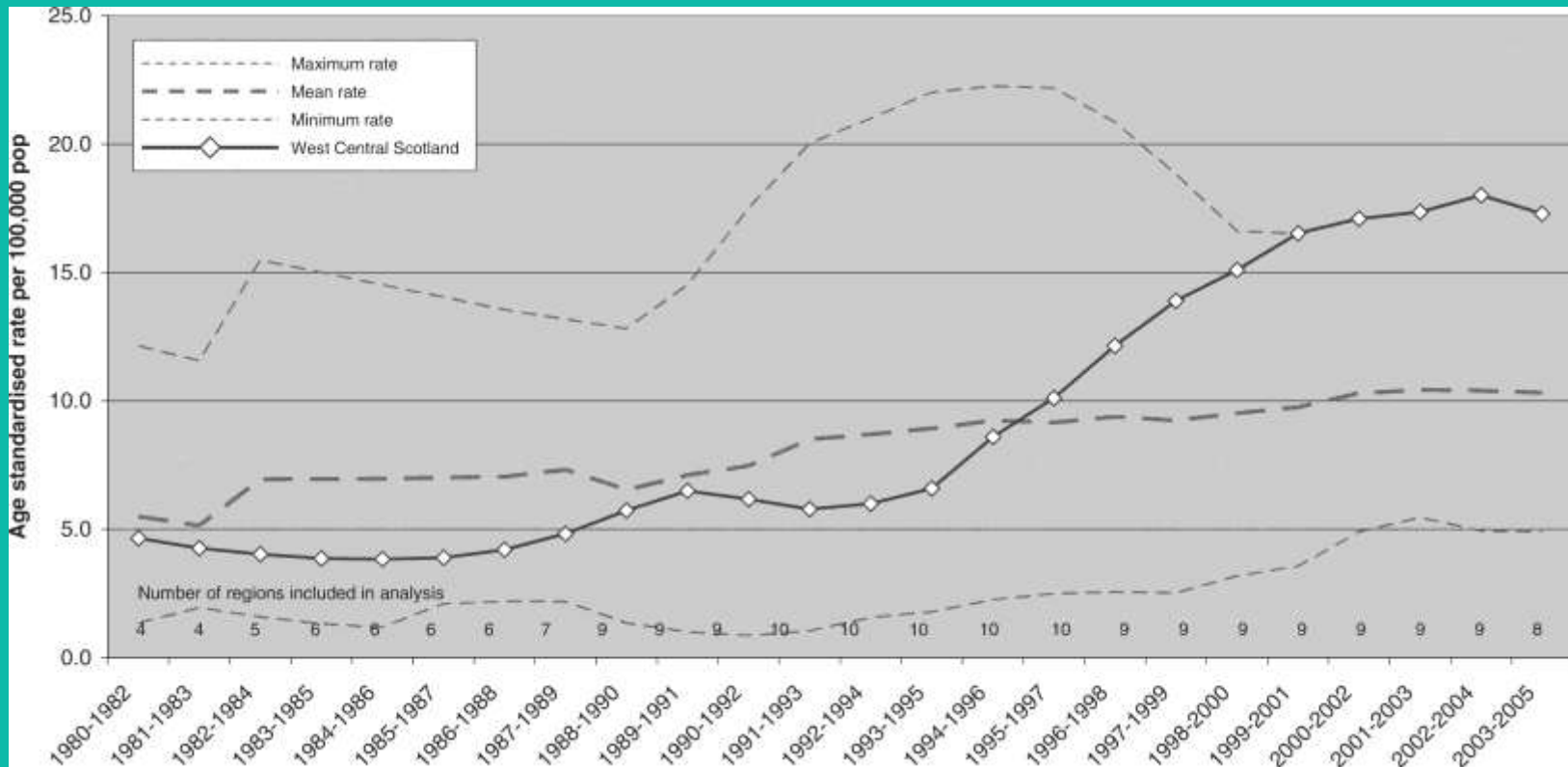
Calculated from various sources



All cause mortality males 15-44



Cirrhosis mortality males 15-44



Workers in the 1950s



Man's search for meaning

- “Those who have a 'why' to live, can bear with almost any 'how'.”

Viktor Frankl 1902-97



Aaron Antonovsky 1923-1994



Sense of coherence....

“.....expresses the extent to which one has a feeling of confidence that the stimuli deriving from one's internal and external environments in the course of living **are structured, predictable and explicable**, that one has the **internal resources** to meet the demands posed by these stimuli and, finally, that these demands are seen as **challenges, worthy of investment and engagement.**”

For the creation of health....

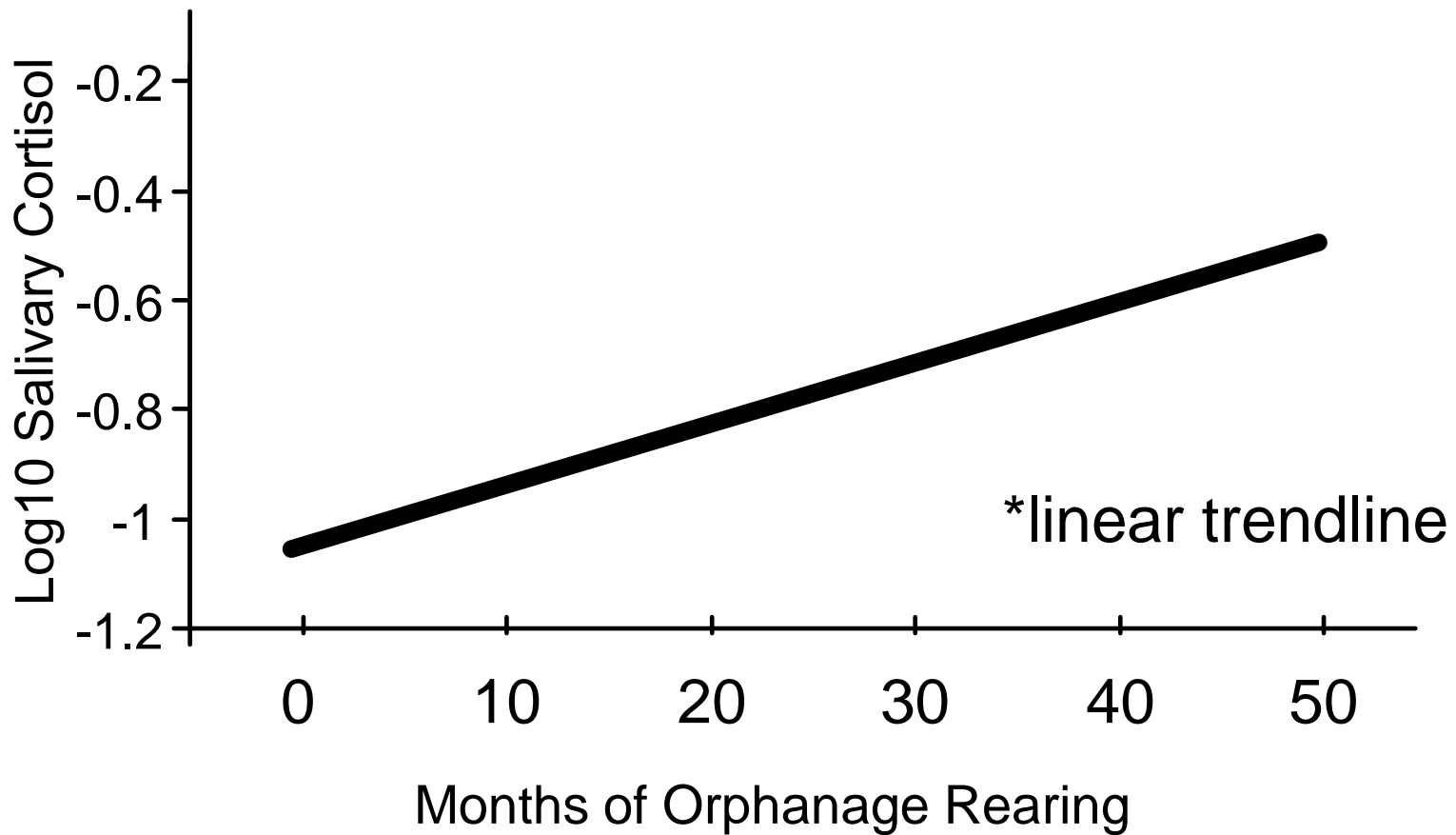
....the social and physical environment must be:

- Comprehensible
- Manageable
- Meaningful
-or the individual would experience chronic stress

Alvin Toffler – Future Shock 1970

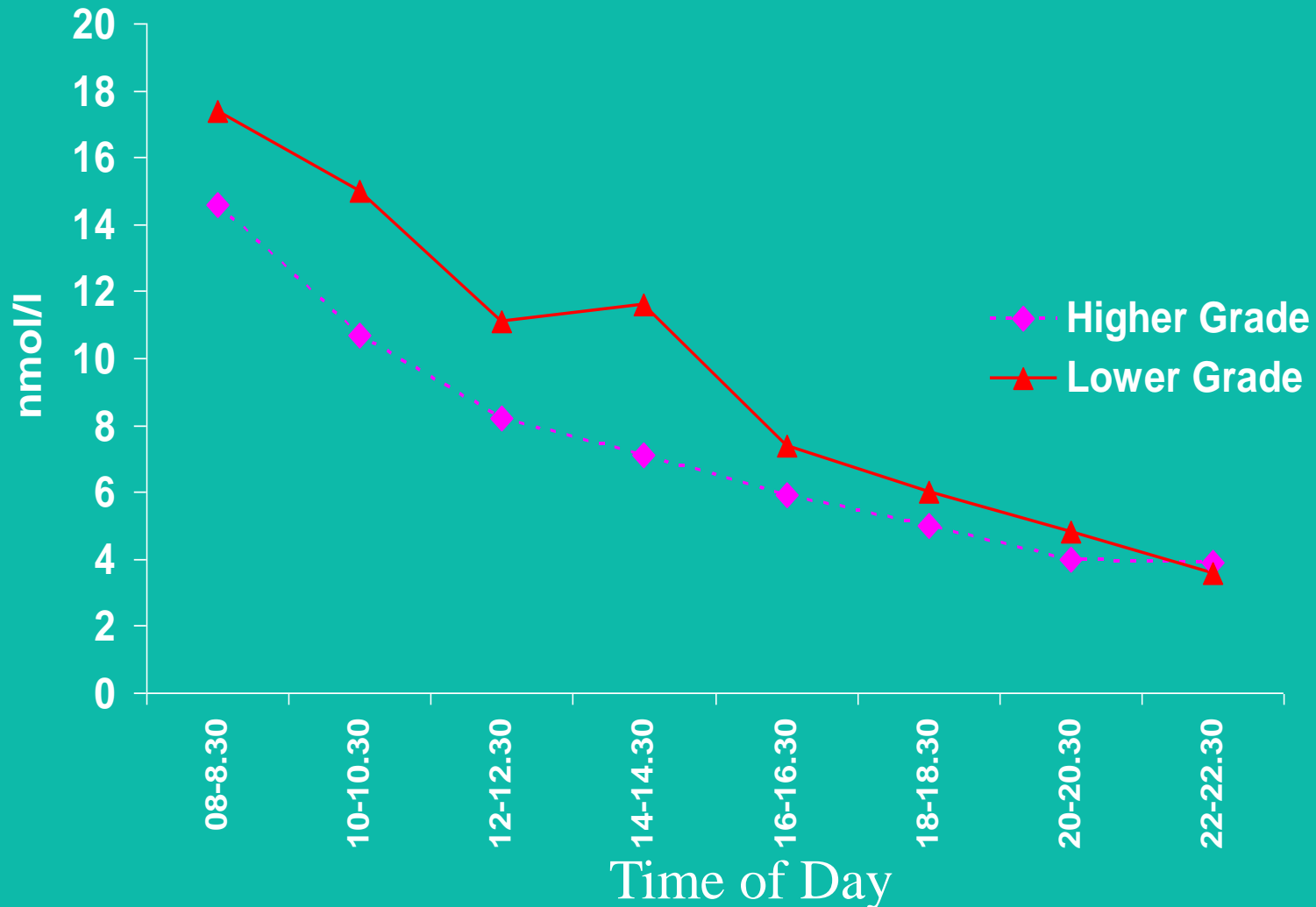
- “To survive, to avert what we have termed future shock, the individual must become infinitely more adaptable and capable than ever before. We must search out totally new ways to anchor ourselves, for all the old roots - religion, nation, community, family, or profession - are now shaking under the hurricane impact of the accelerative thrust.”

Evening Cortisol Levels Increase with Months of Orphanage Rearing *

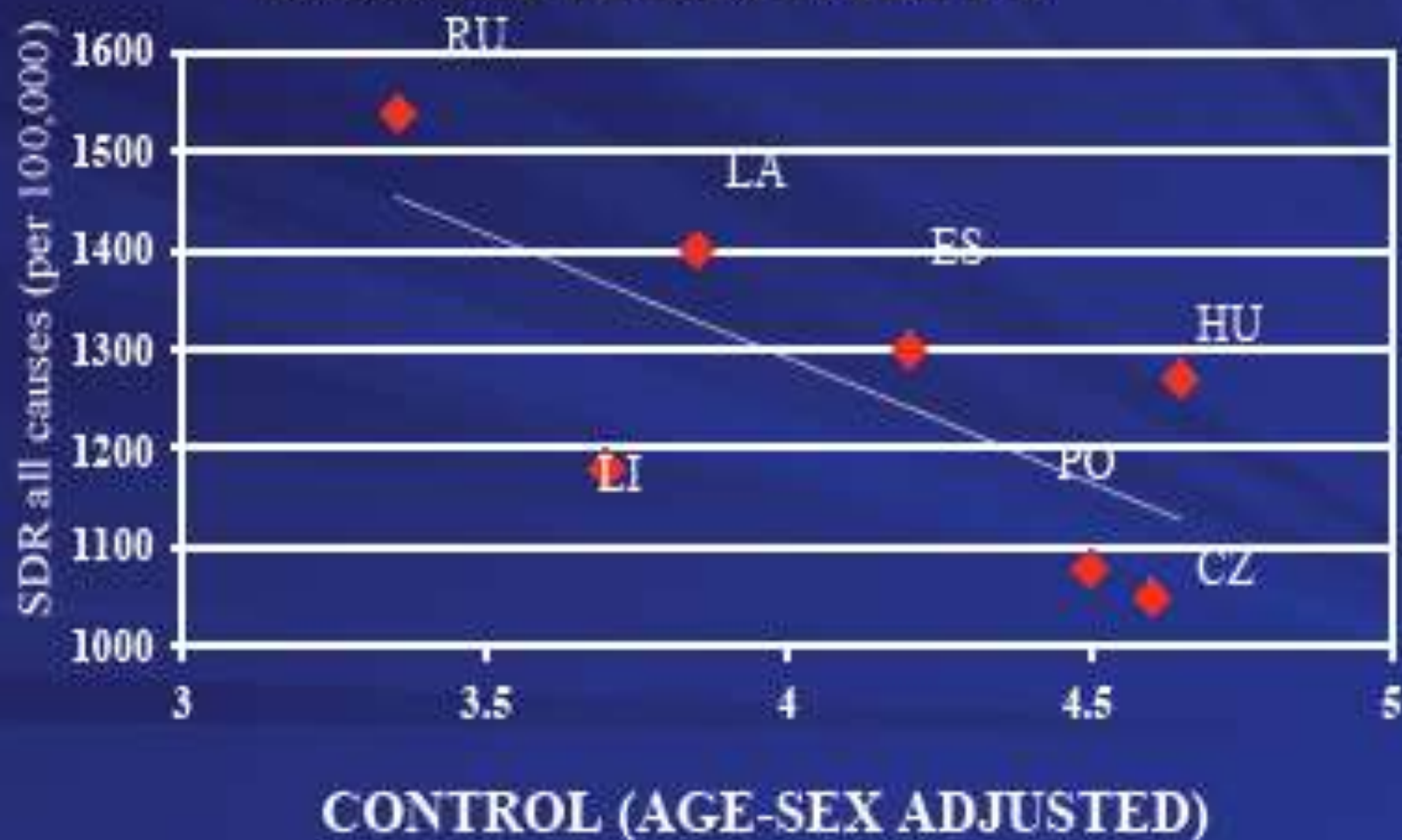


STRESS AND GRADE OF EMPLOYMENT: MEN

Salivary Cortisol



PERCEIVED CONTROL IN NATIONAL SAMPLES AND ALL CAUSE MORTALITY



Environmental determinants of inflammatory status

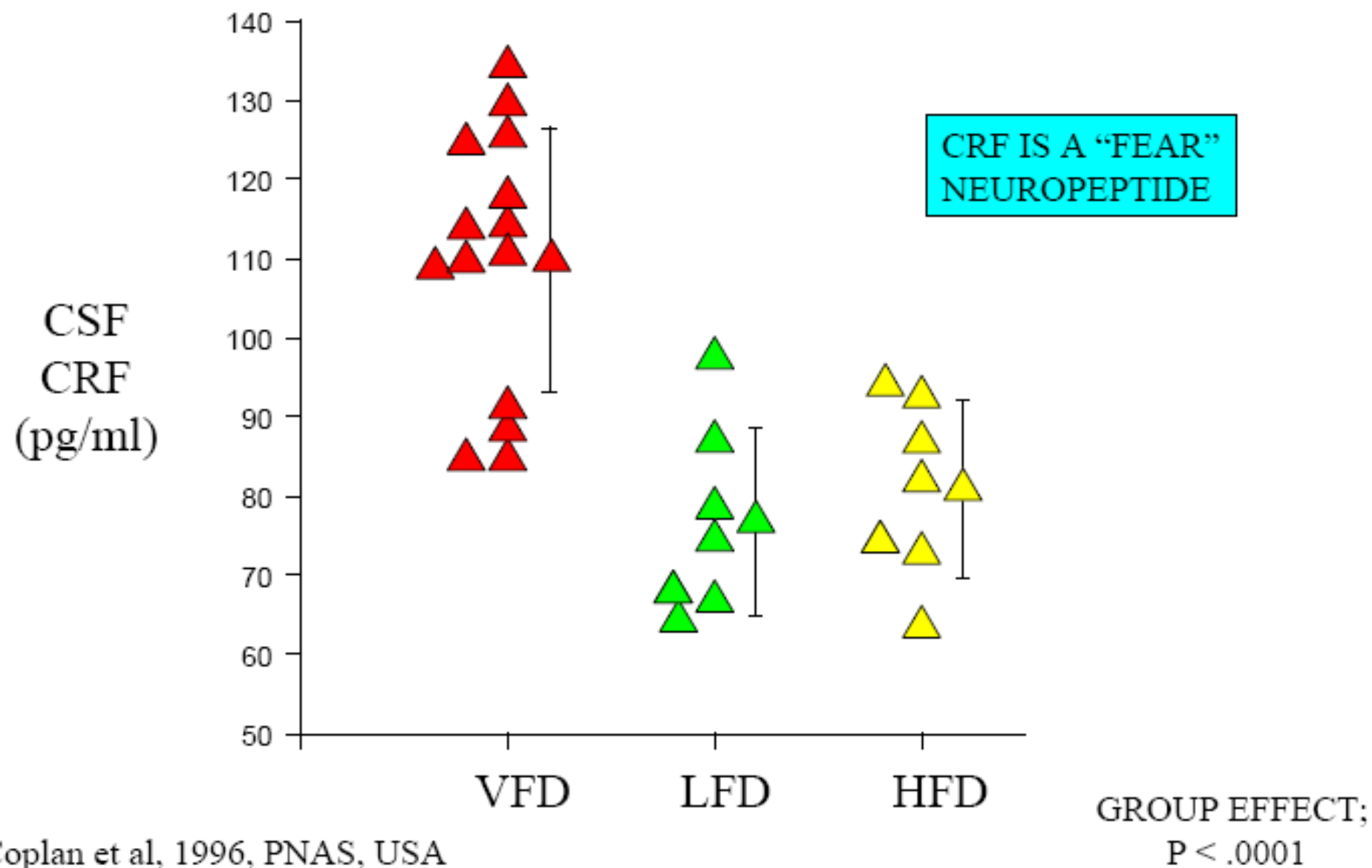
	Depcat	% smokers	CRP (median) mg/dl Never-smokers	CRP (median) mg/dl Smokers
affluent	1	36.8	0.71	1.42
	2	35.9	1.00	2.34
	3	39.1	1.11	2.25
	4	44.1	1.21	2.44
	5	46.6	1.13	2.53
	6	49.3	1.25	3.07
deprived	7	55.5	1.48	3.29







CSF CRF CONCENTRATIONS IN DIFFERENTIALLY-REARED JUVENILE PRIMATES:



Adipocyte programming

insulin resistance, inflammation and ALP

skeletal muscle

Insulin resistance

NEFAs

triglyceride↑

Low HDL
small LDL

Atherogenic
Lipoprotein
Phenotype

liver

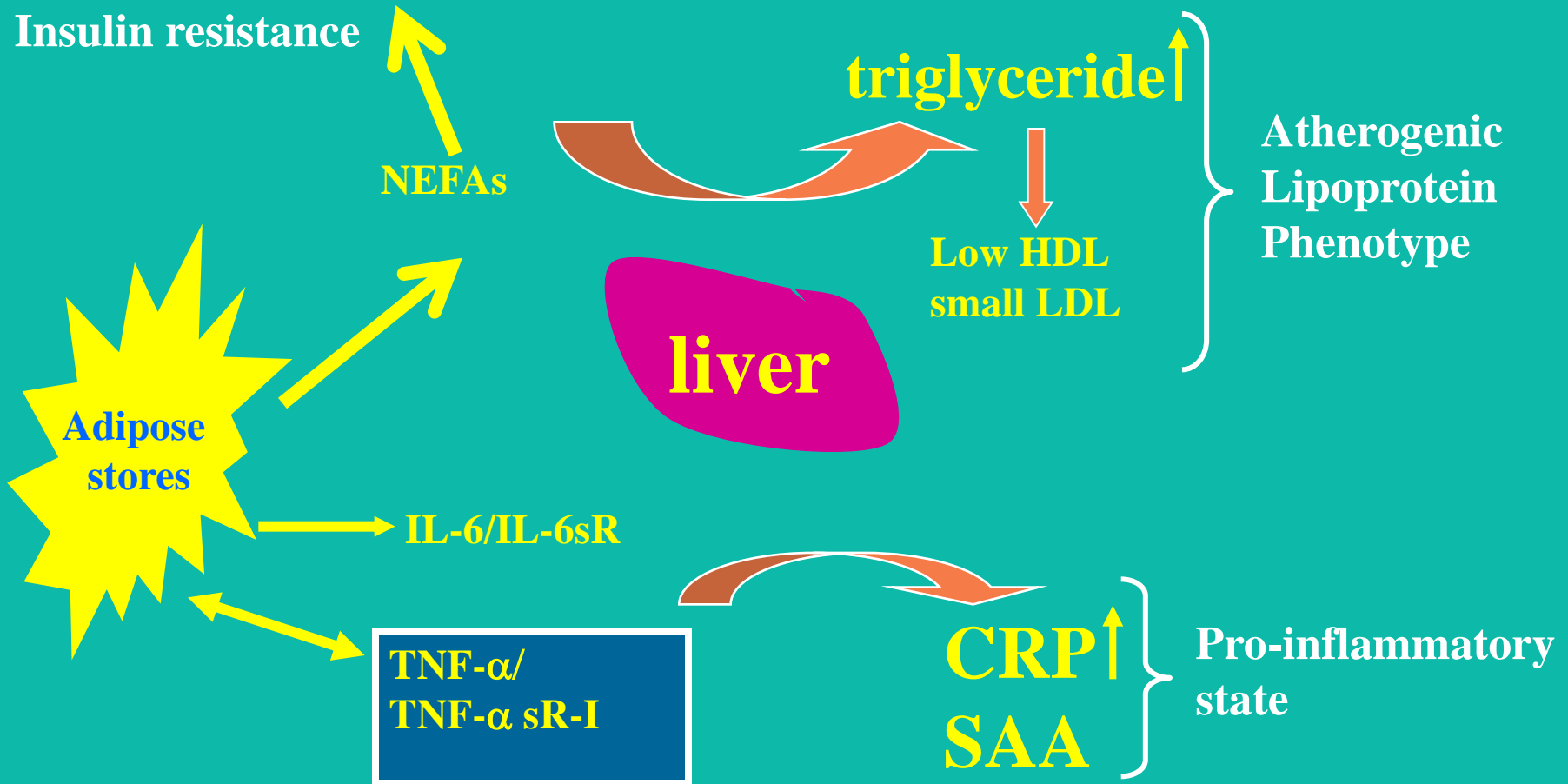
Adipose
stores

IL-6/IL-6sR

TNF- α /
TNF- α sR-I

CRP↑
SAA

Pro-inflammatory
state



Persistence hunting







Ford



We deliver to your door.
(Your fridge door.)

Groceries carried to your kitchen by www.tesco.com Every little helps!

TESCO

The Human Brain Under Stress: key brain regions

Prefrontal cortex

Executive function, working memory

Atrophy

Hippocampus

Contextual, episodic, spatial
memory

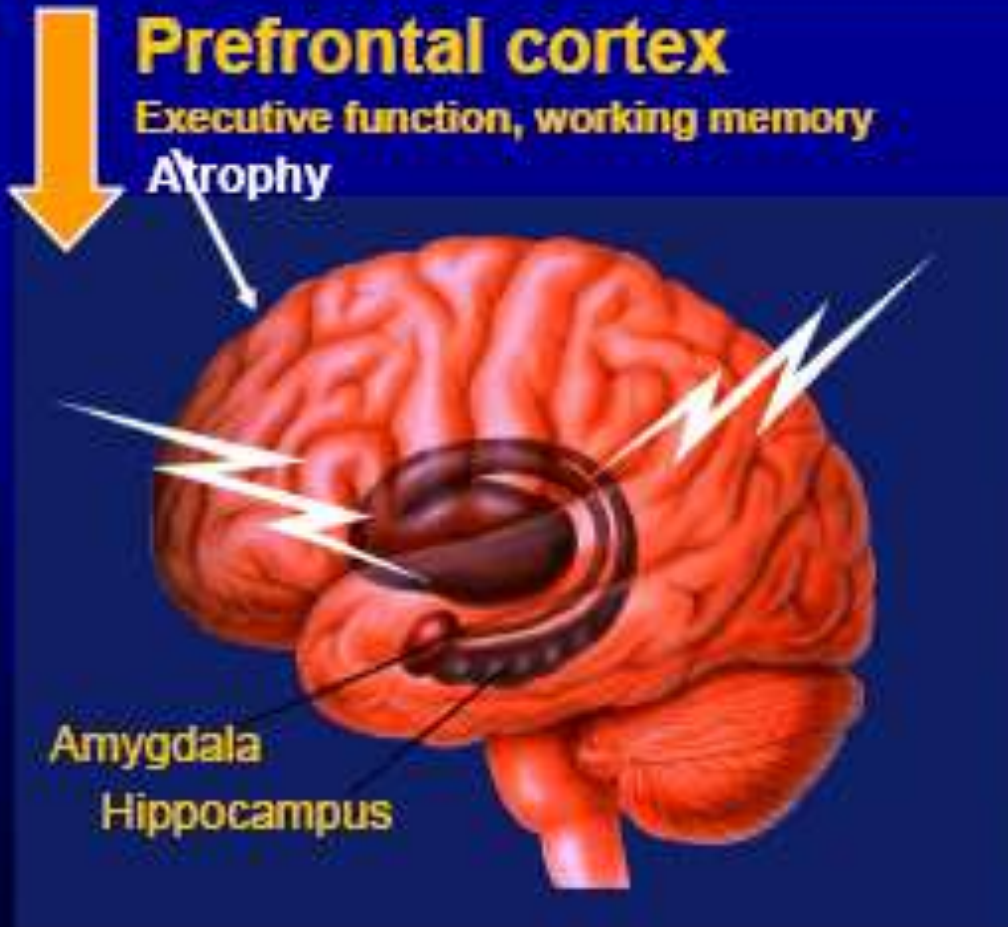
Atrophy

Amygdala

Emotion, fear, anxiety

Hypertrophy.

later atrophy



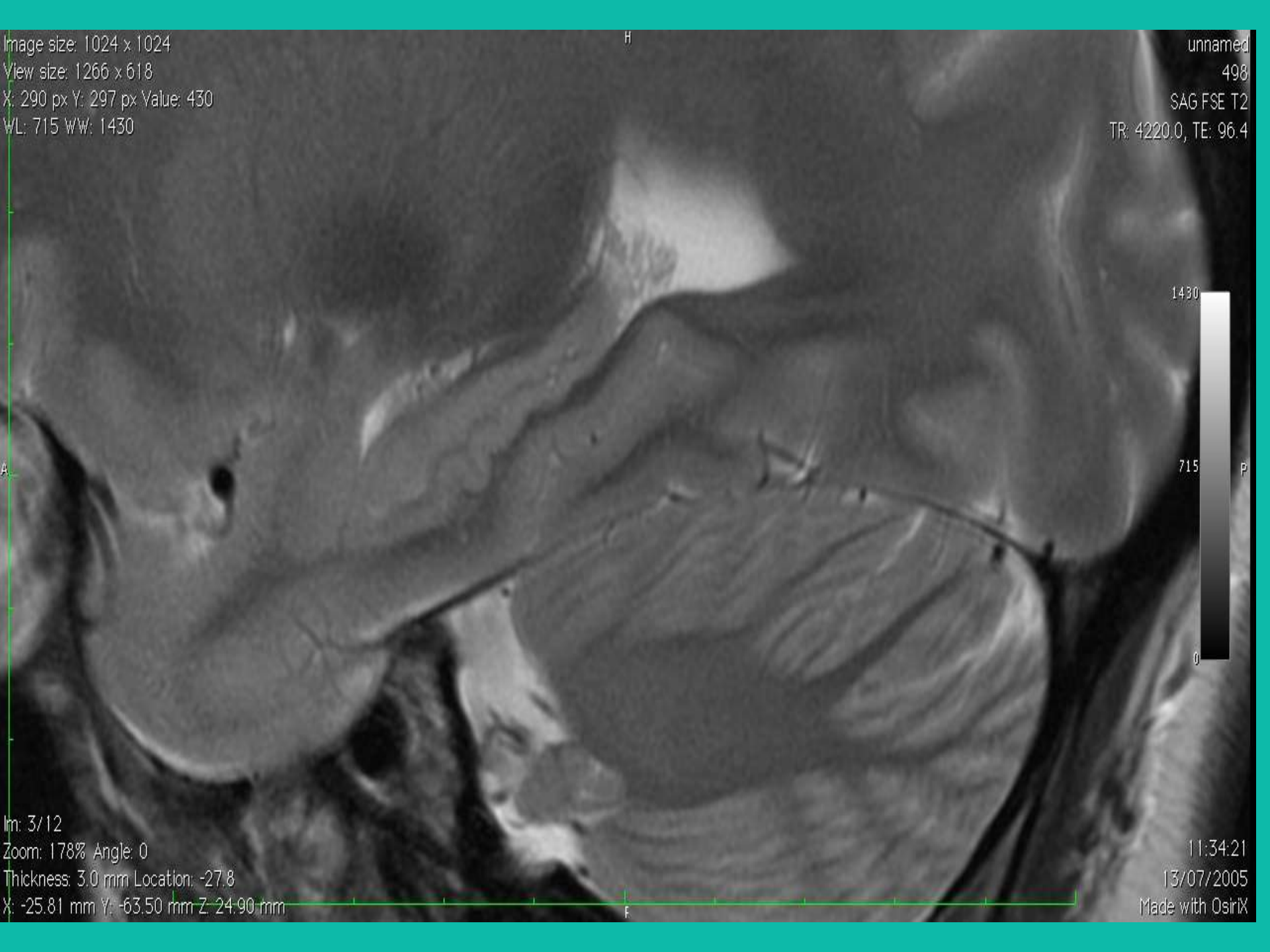
Attachment theory

- Ainsworth
 - Deep emotional connection that infant develops with primary caregiver
 - Reflects an “internal working model” expressing the infant’s expectations of parental behaviour in meaningful situations
 - Basis for development of later relationships
- Increasingly recognised as determinant of later emotional, cognitive and social outcomes

Image size: 1024 x 1024
View size: 1266 x 618
X: 290 px Y: 297 px Value: 430
WL: 715 WW: 1430

H

unnamed
498
SAG FSE T2
TR: 4220.0, TE: 96.4

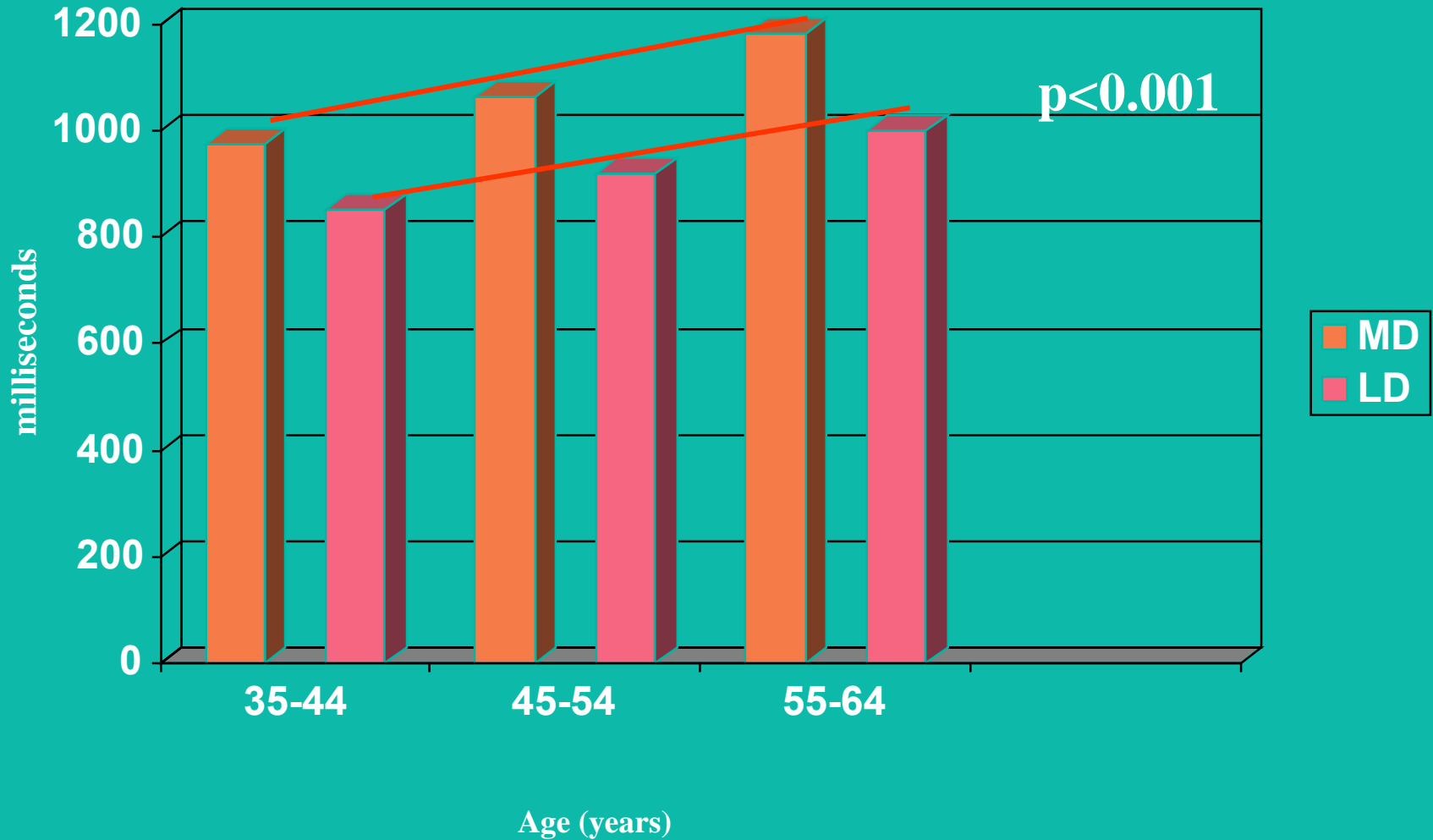


Im: 3/12
Zoom: 178% Angle: 0
Thickness: 3.0 mm Location: -27.8
X: -25.81 mm Y: -63.50 mm Z: 24.90 mm

F

11:34:21
13/07/2005
Made with OsiriX

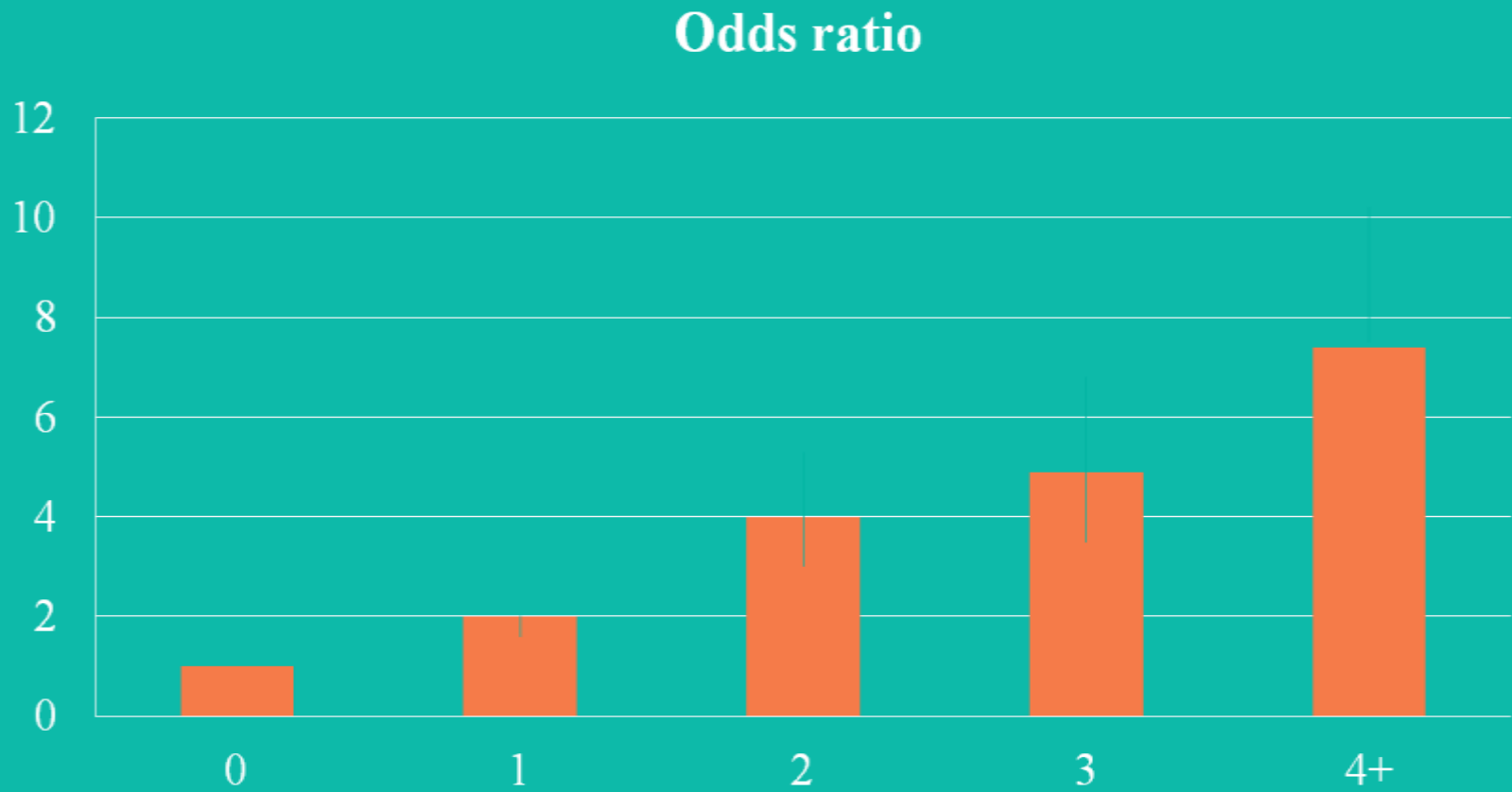
Choice reaction time



Adverse childhood events study

- Physical/sexual/emotional abuse
- Neglect (physical/emotional)
- Domestic substance abuse
- Domestic violence
- Parental mental illness
- Parental criminality

Adverse childhood events risk of alcoholism

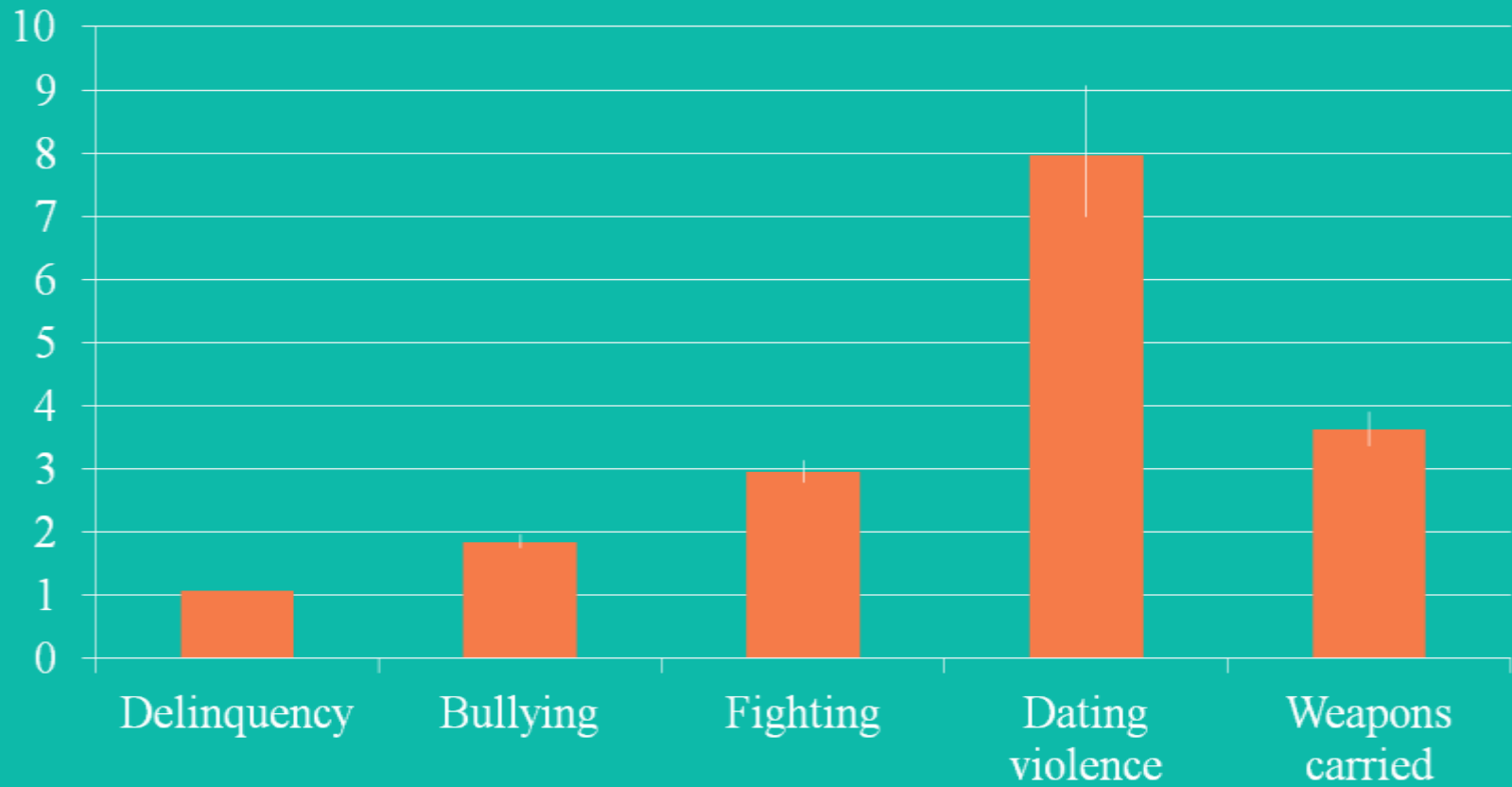


Hillis et al 2011

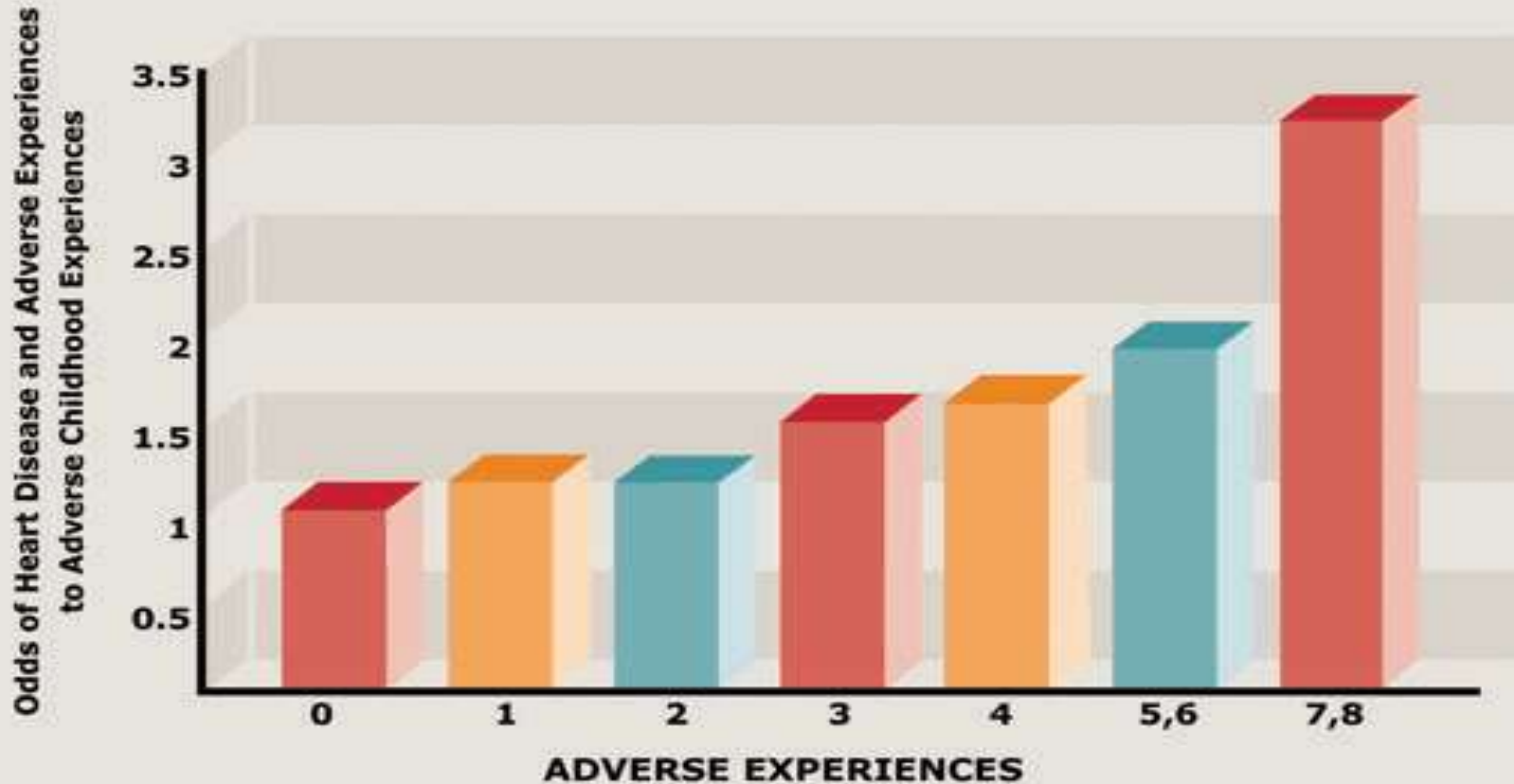
Adverse childhood events

risk of perpetrating violence

Boys experiencing physical abuse

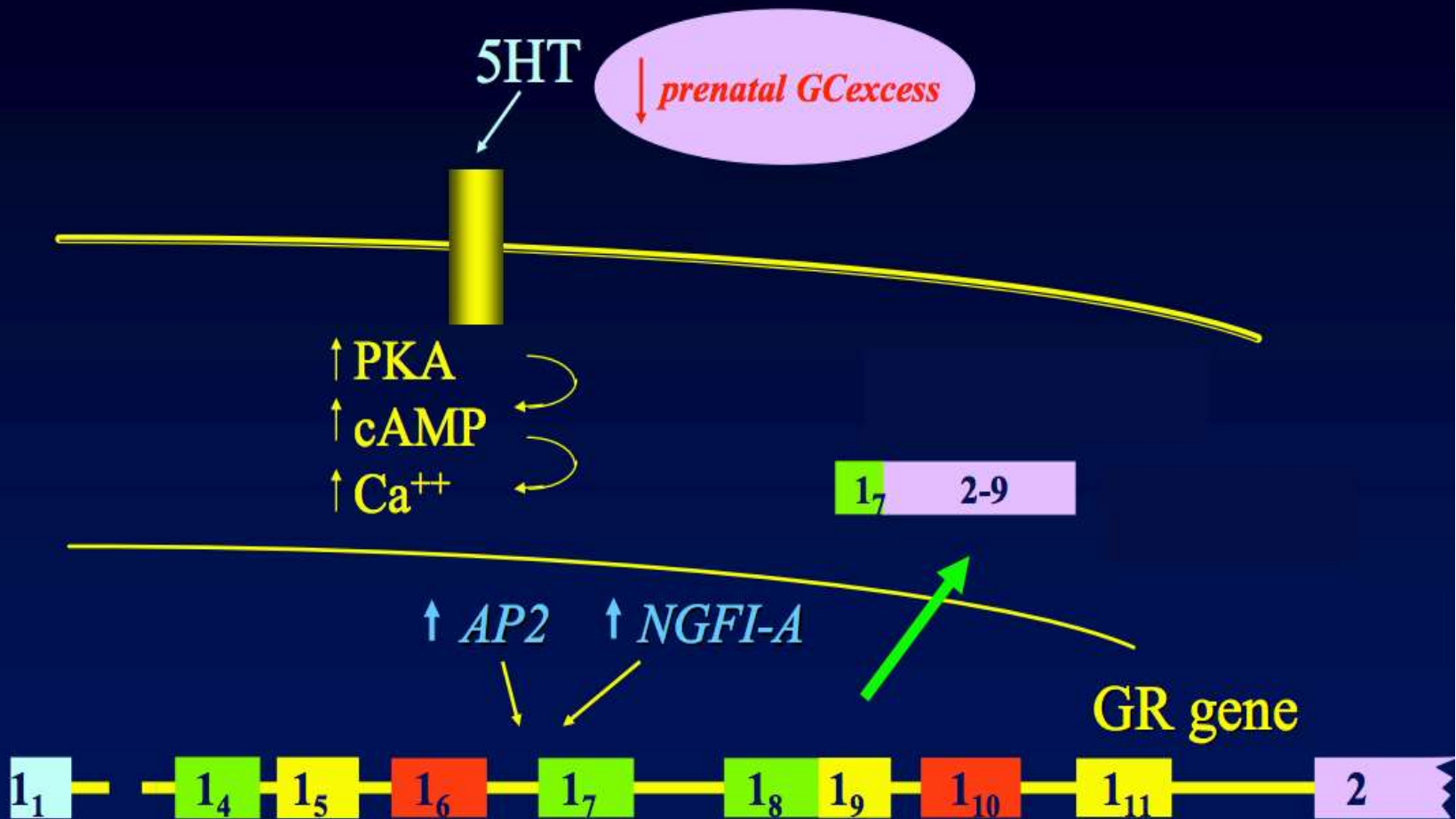


Risk of heart disease and early adversity

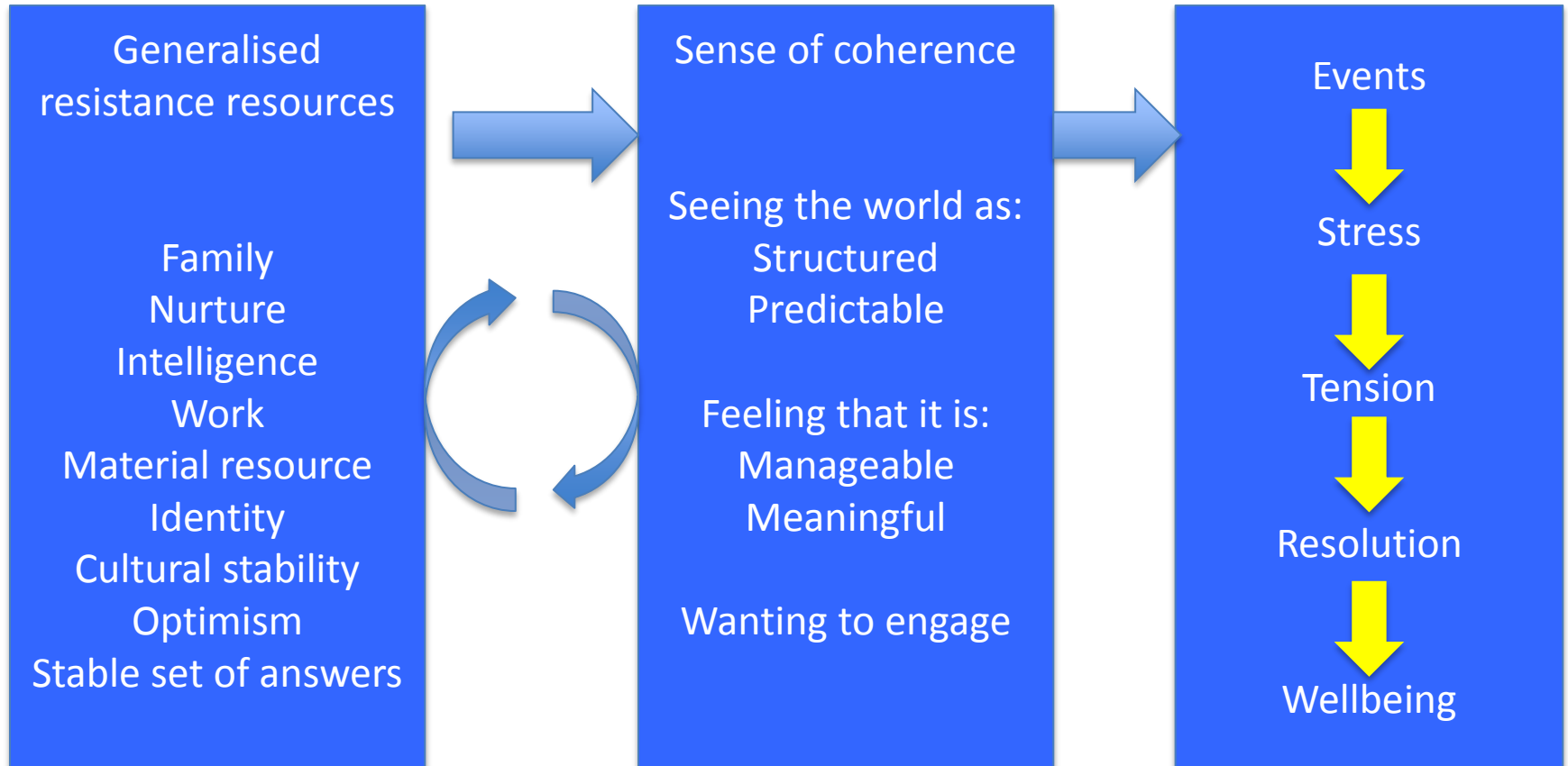


The molecular biology of a cuddle

5HT regulates hippocampal GR gene transcription



Creating wellbeing



Social connectedness

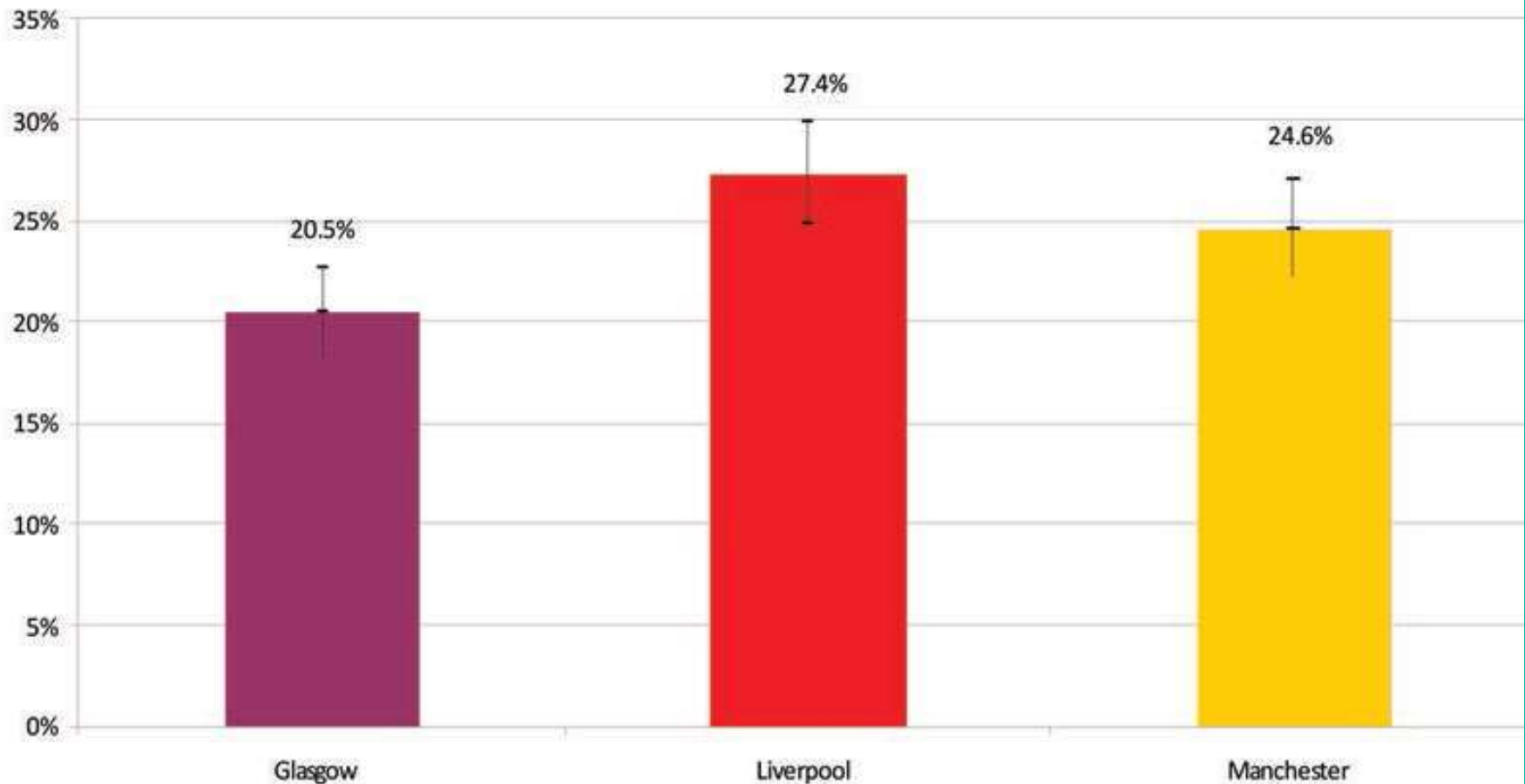
- 148 studies comprising 308,849 participants, high levels of social integration conferred a 50% increased likelihood of survival.
- Complex patterns of social integration conferred a 90% increase in survival.
- Simple indicators such as living alone versus living with others conferred a survival benefit of only 19%.

Alienation and Frankenstein

- "I came across people, other beings which I could see were almost like myself. Or so I thought at first when I approached them, though, I found that they did not consider me as one of their own kind. As soon as they saw me, their faces became twisted with fear. They shouted at me and threw things and ran away from me, just as my own maker had done. So this is what I learned about myself - that I was a disgusting creature. Even though I had given them no cause, all men hated me."

Trust in 3 cities

Percentage of respondents reporting that generally people can be trusted



Meaning and purpose?



Making change happen at scale

□ Will

- Does everyone agree to change?

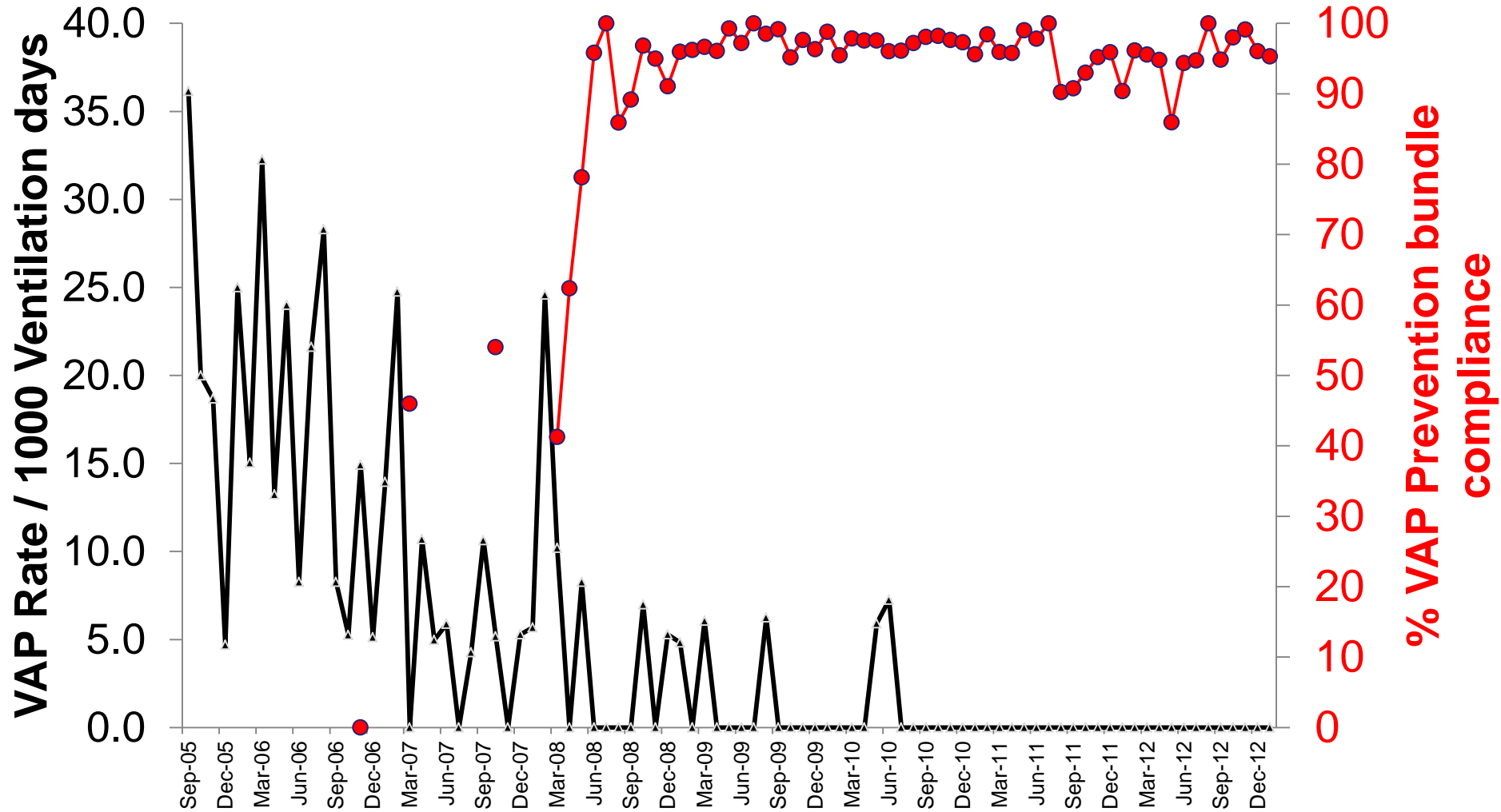
□ Ideas

- Agree an aim and things to do which will help reach that aim

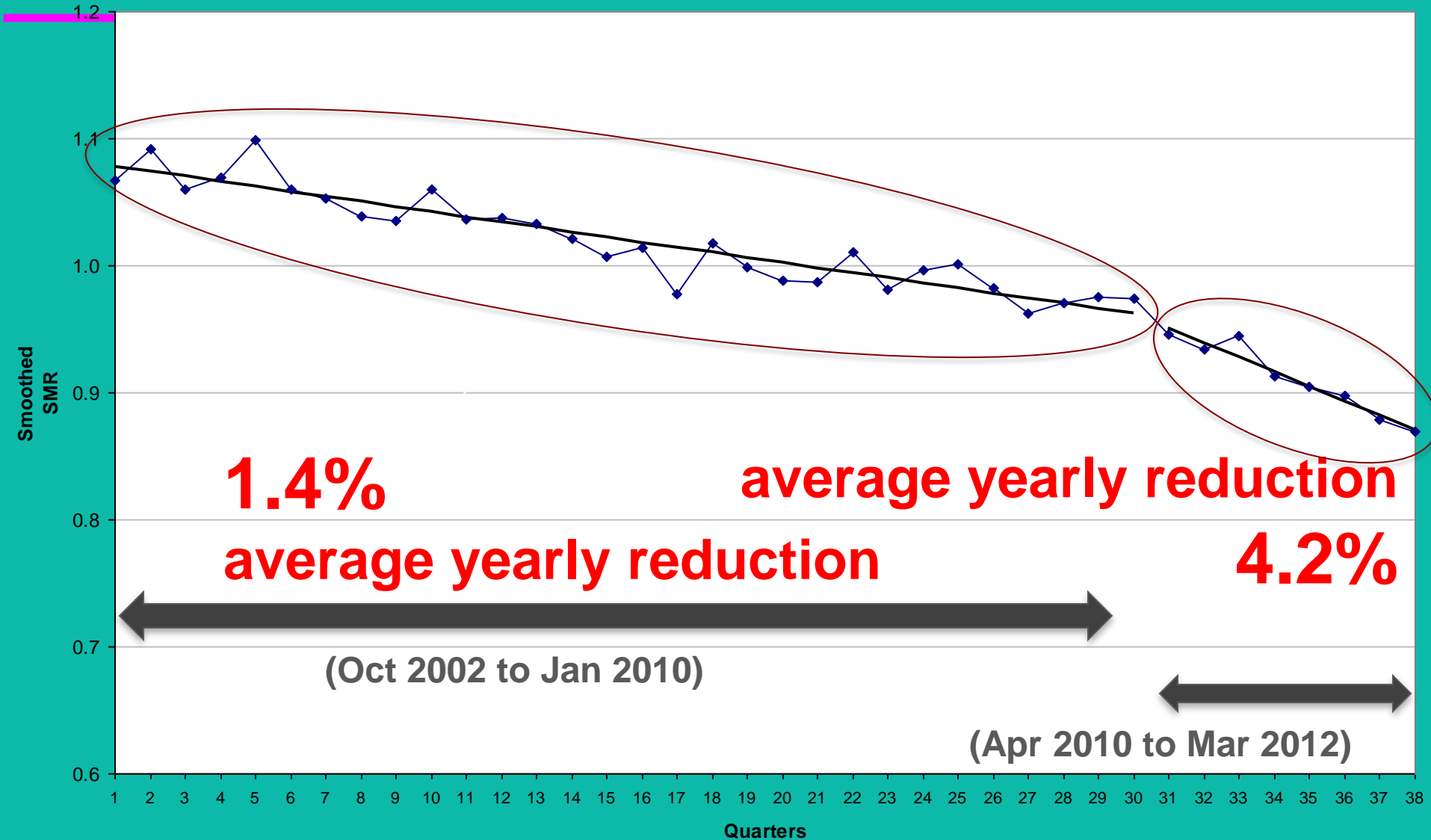
□ Execute the change

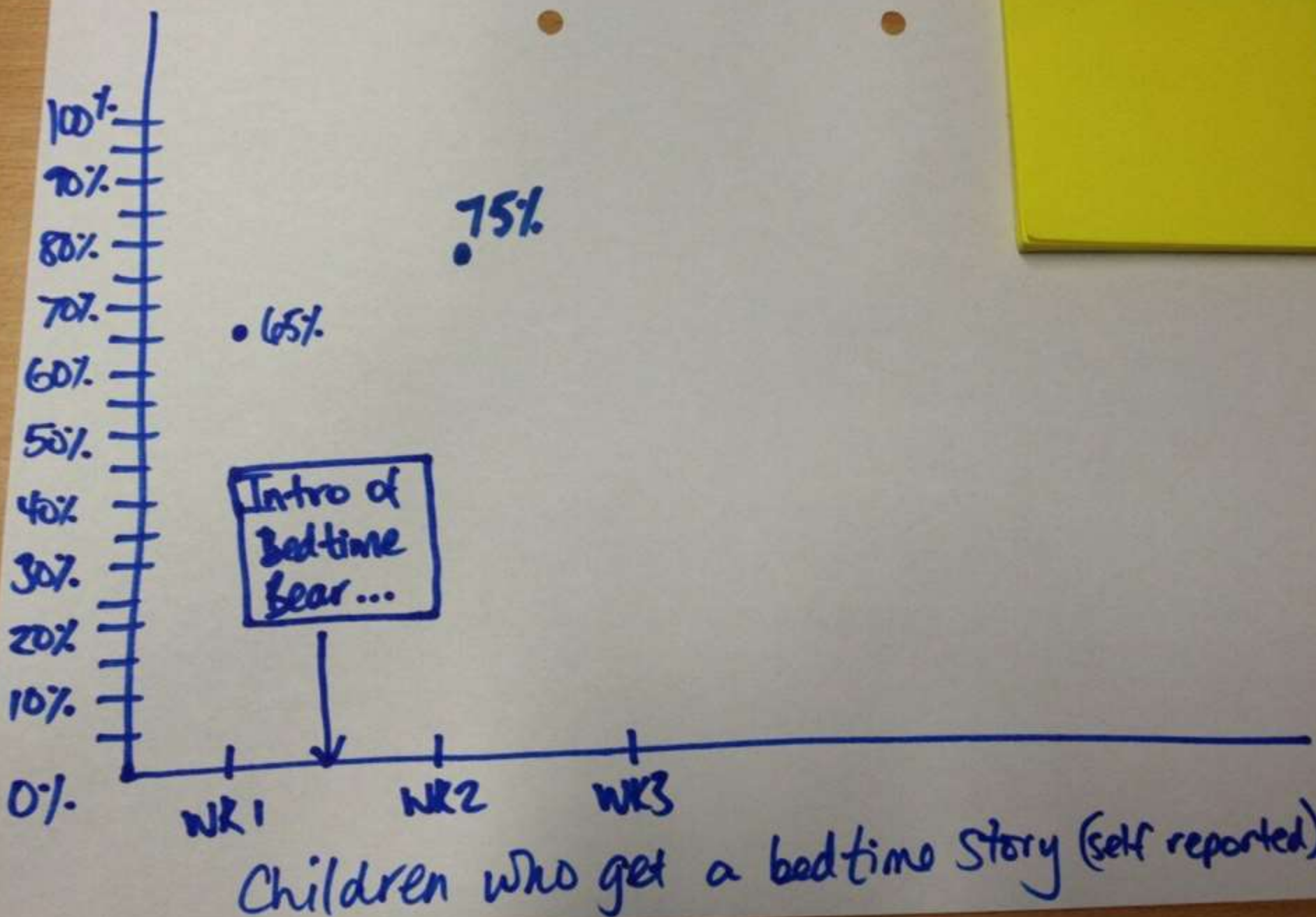
- Do something different and record what happens

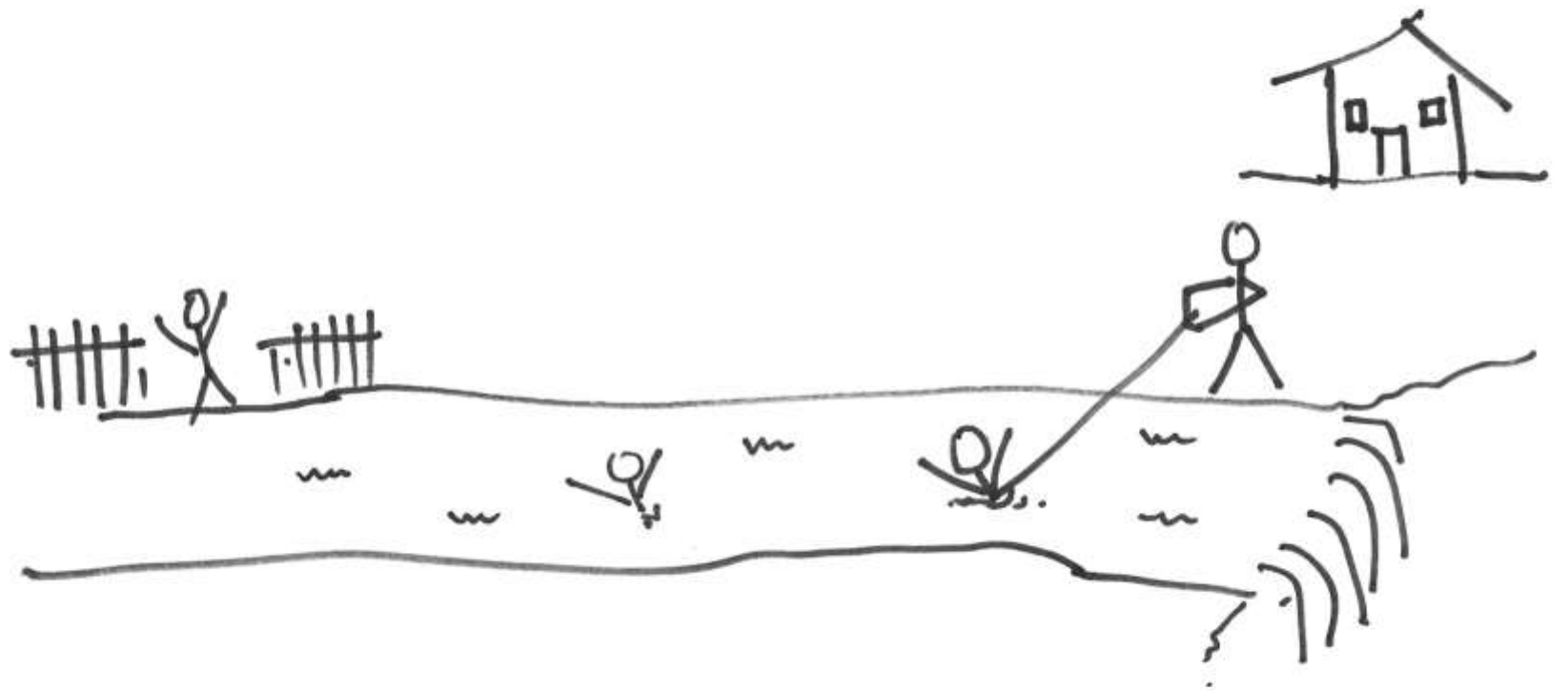
NHS FV ICU VAP incidence/% VAP Preventon bundle compliance Sept 05 - Dec 12



Hospital Standardised Mortality Ratios (Seasonally Adjusted) Scotland: Oct-Dec 2002 to Jan-Mar 2012









Do one brave thing today....then run like hell!



Jimmy Reid 1971



Rectorial Address

- “Let me right at the outset define what I mean by alienation. It is the cry of men who feel themselves the victims of blind economic forces beyond their control. It's the frustration of ordinary people excluded from the processes of decision making. The feeling of despair and hopelessness that pervades people who feel with justification that they have no real say in shaping or determining their own destinies....”

