WHAT'S TRENDING?

EXPLORING THE TRENDS IN YOUTH HEALTH IN IRELAND

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Presentation Overview

- An overview of HBSC

- Trends – Why? and How?
  - Methodological considerations
  - Issues / challenges
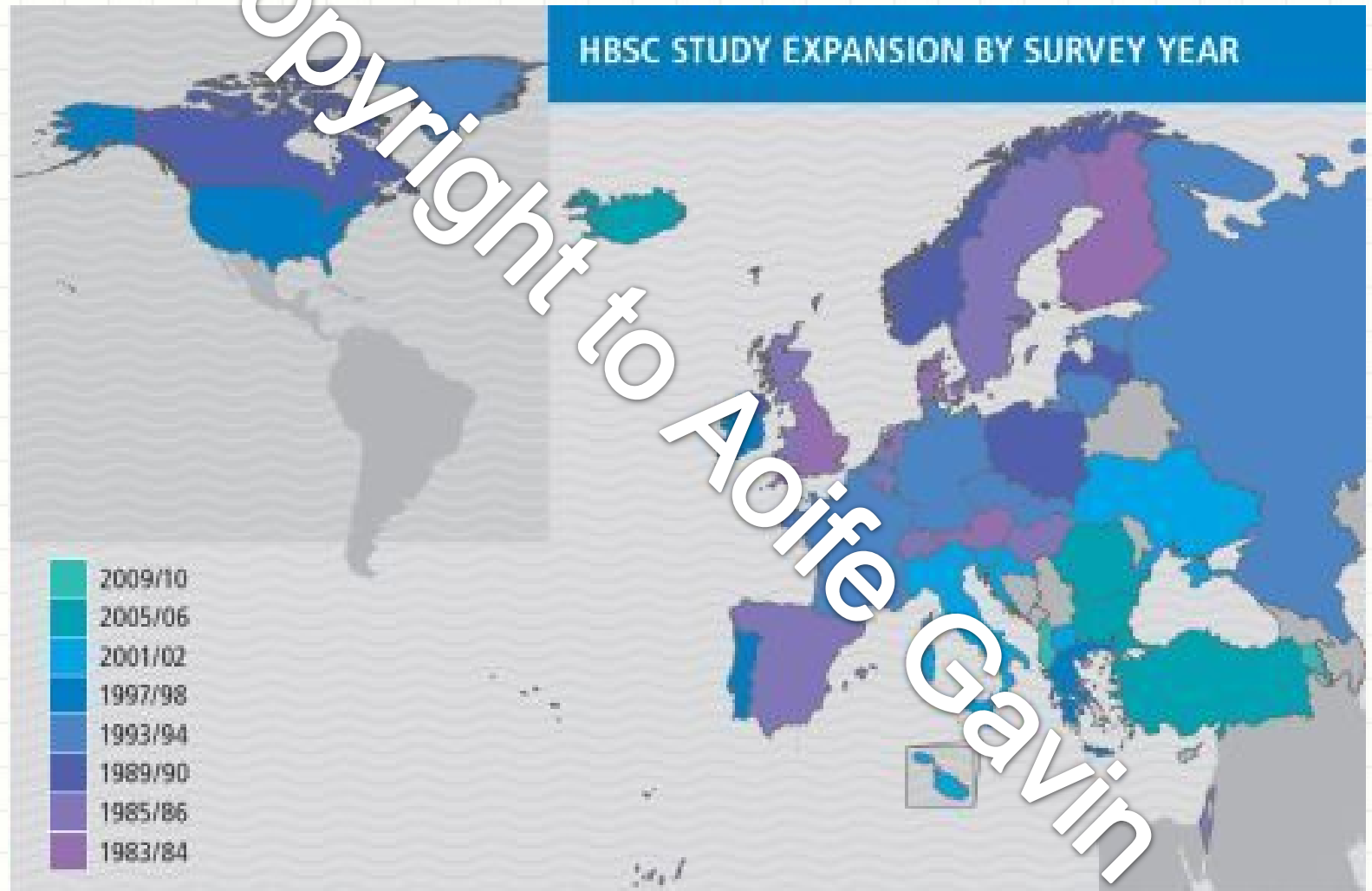
- Main findings from the report

HBSC Background

- Collaborative study with WHO European Region

- Initiated in 4 countries in 1982

- 43 countries/regions collected data in 2010

- Data collected every 4 years
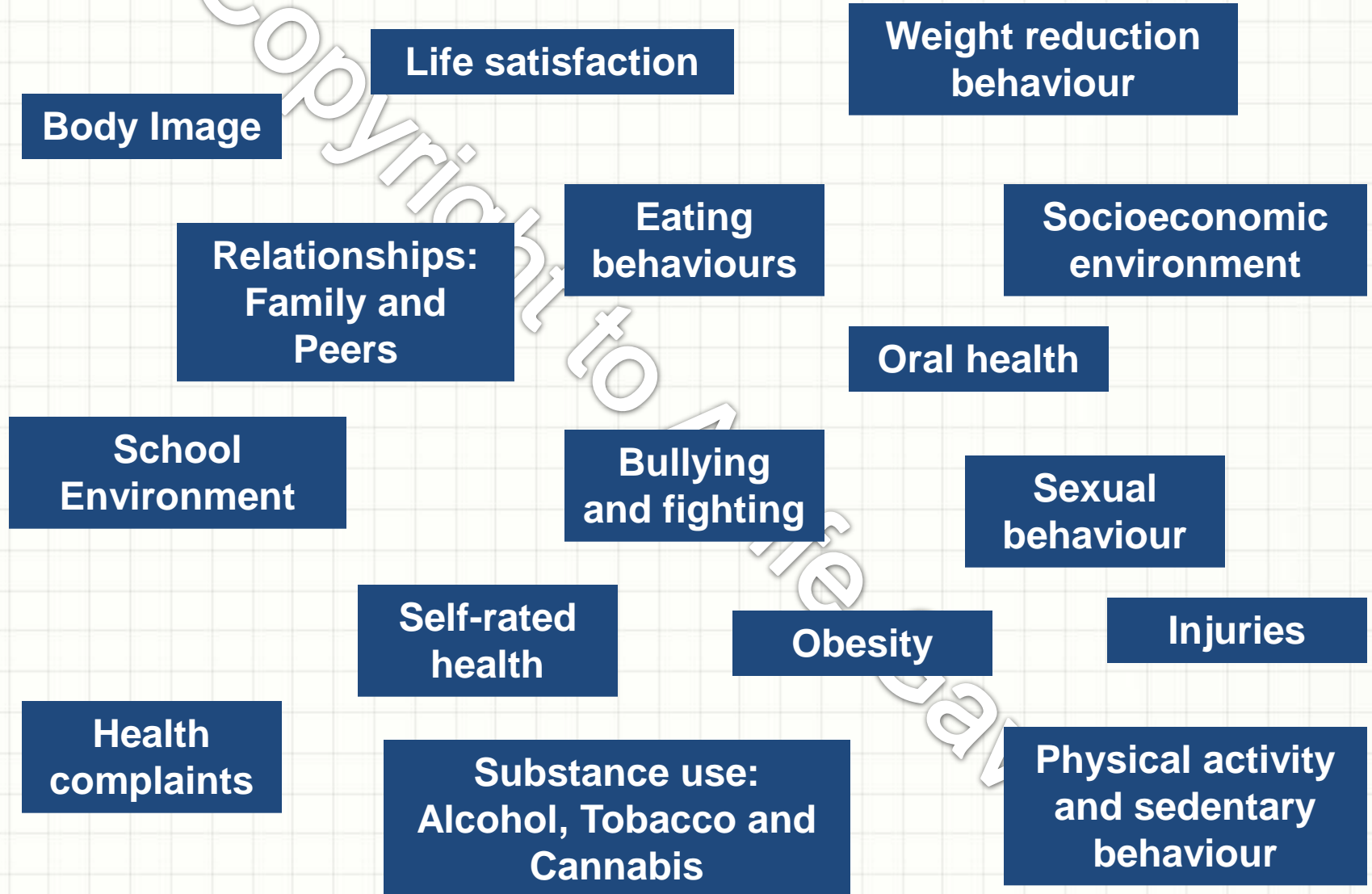
- International protocol

HBSC: Overall research approach

- Focuses on understanding young people's health in their social context – where they live, at school, with their family and friends.

- Main objectives:
  - Gain new insight into young people's health and well-being
  - Understand the social determinants of health
  - Inform policy and practice to improve young people's lives

HBSC International 2010

HBSC STUDY EXPANSION BY SURVEY YEAR

2009/10
2005/06
2001/02
1997/98
1993/94
1989/90
1985/86
1983/84

Focus and topic groups

Life satisfaction

Weight reduction behaviour

Body Image

Eating behaviours

Socioeconomic environment

Relationships: Family and Peers

Oral health

School Environment

Bullying and fighting

Sexual behaviour

Self-rated health

Obesity

Injuries

Health complaints

Substance use: Alcohol, Tobacco and Cannabis

Physical activity and sedentary behaviour

HBSC Methods

- Protocol development by international network
- Random/systematic-random sampling
- Class as the sampling unit
- Nationally representative samples
- Self-report, self-completion questionnaires
- Mandatory, Optional, National questions
- Same methods used in all 4 cycles

Table 3.1 Summary of methodological approach to data collection across the four HBSC Ireland surveys

	2010	2006	2002	1998
Ethics	Full ethical approval was granted by the NUIG Research Ethics Committee.	Full ethical approval was granted by the NUIG Research Ethics Committee.	Full ethical approval was given by the Royal College of Physicians in Ireland	Full ethical approval was given by an Ad-hoc committee convened by the DOHC
Population	School-going children aged 9-17.	School-going children aged 9-18 .	School-going children aged 10-17.	School-going children aged 9-17.
Sampling Frame	Department of Education and Science school lists.	Department of Education and Science school lists.	Department of Education school lists.	Department of Education school lists.
Sample	Cluster sample of students in classrooms.			
Stratification	Proportionate to the distribution of pupils across geographical regions.			
Survey instrument	Self-completion questionnaire.			
Delivery/ reminders	Post delivery via Principals and teacher, letter and telephone reminders.			
Return	Freepost addressed envelopes provided.			
Response Rate	67% of invited schools / 85% of students	63% of invited schools / 83% of students.	51% of invited schools / 84% of students	72% of invited schools / 89% of students
Obtained Sample	256 schools / 16,060 pupils	215 schools / 10,334 pupils	176 schools / 8,424 pupils.	schools / 8,497 pupils
Data Quality	Data were entered according to HBSC international protocol			

HBSC Ireland

- Four cycles of data collection to date:
  - 1998
    - N=8,497, 5th class to 5th year; 10-17 year olds
  - 2002
    - N=8,424, 5th class to 5th year; 10-17 year olds
  - 2006
    - N=13,738, 3rd class to 5th year; 9-17 year olds
  - 2010
    - N=16,060, 3rd class to 5th year; 9-17 year olds
  - Trends 1998-2010
    - 5th class to 5th year; 10-17 year olds
    - Items that were used in each cycle 1998-2010 or since 2002

Why present trends?

Commissioned by the Department of Health to produce a trends report

Analysing and presenting trends can provide invaluable information for:

- Needs assessment
- Programme planning and evaluation and
- Policy development actions

(Rosenberg, 1997)

Due to cross-sectional nature of HBSC survey it should be noted that the trends presented are not reporting change in the behaviour of individuals, but rather, a change of reported behaviour of different cohorts.

Children's lives

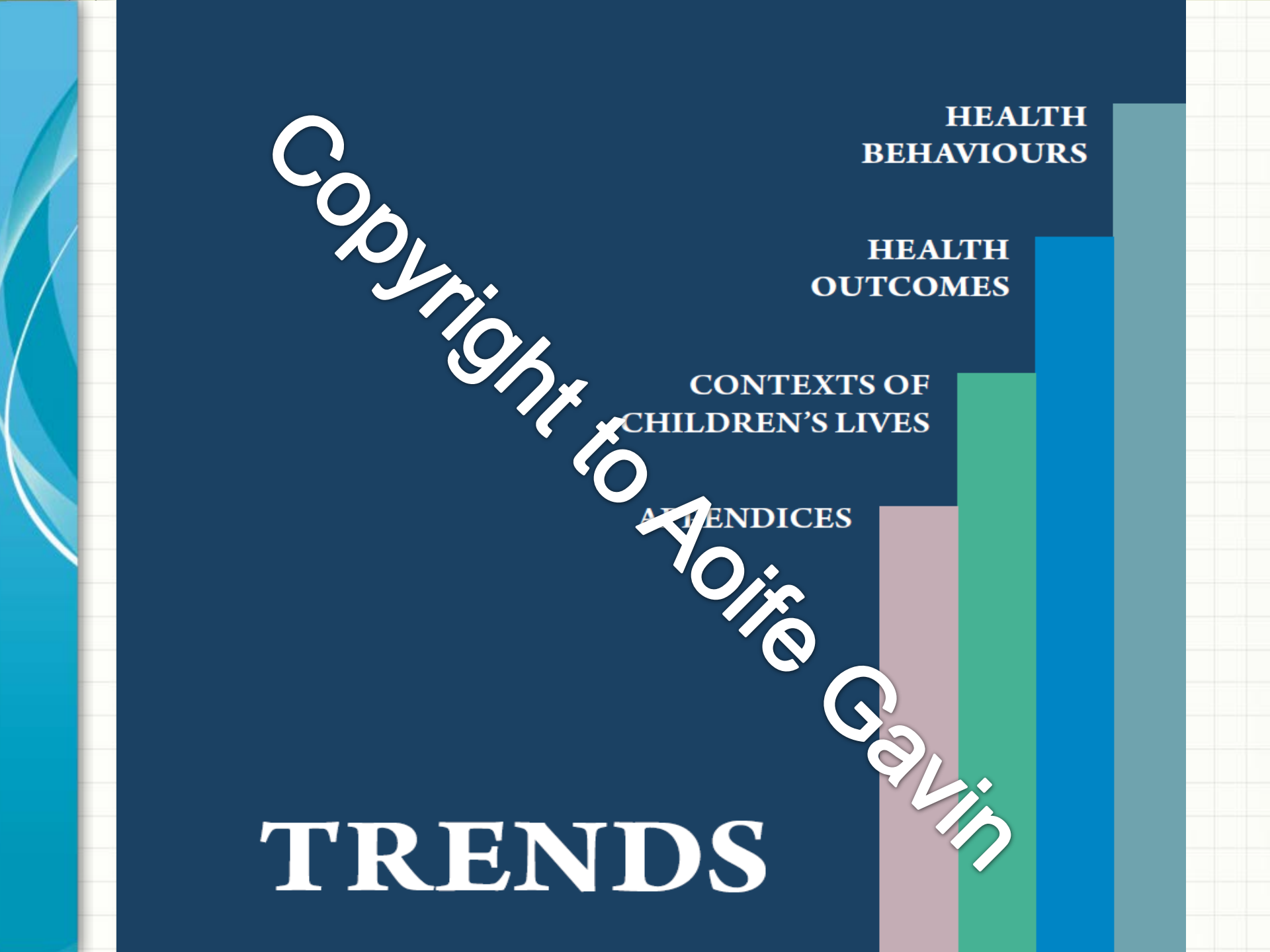| Contexts:	Risk behaviours:	Health outcomes:
Family	Drinking, Smoking	Well being
School	**Health enhancing behaviours**:	Life satisfaction
Peers	Physical activity	Self rated health
	Leisure activities	

SES
Gender
Age
Social
Class
Ethnicity

HEALTH
BEHAVIOURS

HEALTH
OUTCOMES

CONTEXTS OF
CHILDREN'S LIVES

APPENDICES

TRENDS

PREPARING THE DATA AND TRENDS ANALYSIS

Preparing the data files

- Four questionnaires – cross-reference
- Same wording, same response options
- 1998-2010 or 2002-2010
- Over 165 variables across the questionnaires

Deciding on indicators to include

HBSC Indicators for Trends

(1) CONTEXT'S OF CHILDREN'S LIVES

Family	School	Peers	Locality
Easy to talk to mother	*Like school*	*Close male friends*	Where you live (urban/rural)
Easy to talk to stepmother	Students enjoy being together	*Close female friends*	Local area well off
Easy to talk to father	Students are kind and helpful	After school with friends	Groups causing trouble
Easy to talk to stepfather	Students accept me	*Evenings with friends*	Litter
Easy to talk to elder brother	*Students involved in school event*	*E-communication with friends*	Run down houses
Easy to talk to elder sister	*Feel pressured by schoolwork*	Easy to talk to best friend	*Feel safe in local area*
Family composition	Students take part in school rules	*Easy to talk to friend of same sex*	Local area is good place to live
Family well off	Students are too strict	Easy to talk to friend of opposite sex	Safe to play outside
Mother / father job	School rules are fair		*Good places to go*
Number of computers	School is nice place to be		*Can ask for help*
Family car	Feel I belong at the school		
Own bedroom	Feel safe at school		
Vacation	Students encouraged to express views		
	Teachers treat students fairly		
	Extra help from teachers		
	Teacher interested in students		

(2) HEALTH BEHAVIOURS

Health Risk behaviours		Positive health behaviours
Ever smoked	Age first use of glue/solvents	*Fruit consumption*
Current smoker	Soft drinks consumption	Vegetable consumption
Beer, wine, spirits, alcopops, cider	Diet soft drinks consumption	*Tooth brushing*
Been drunk	Crisps consumption	Physical activity in the last 7 days
Lifetime cannabis use	Chips/fried potatoes consumption	*Use of seatbelt*
Last 12 month cannabis use	*Bully others*	*Exercise – times per week*
Last 30 day cannabis use	Times in a physical fight	Exercise – hours per week
Age first get drunk	Watch TV – weekday	
Age first cigarette	Watch TV - weekend	
Age first use of cannabis	*On a diet*	

(3) HEALTH OUTCOMES

Physical health outcomes		Positive health outcomes
Headache	Feeling nervous	*Self rated health*
Stomach-ache	Feeling dizzy	*Happy with life*
Backache	Been bullied	*Life satisfaction*
Feeling low	*Times injured*	
Irritability or bad temper	Think about body	

Health risk behaviours
Positive health behaviours

HEALTH BEHAVIOURS

Physical health outcomes
Positive health outcomes

HEALTH OUTCOMES

Family
School
Peers
Local area

CONTEXTS OF CHILDREN'S LIVES

APPENDICES

All presented by year and gender

TRENDS

SPSS Data File

- Data management
- 4 national data files – coding check
- Merging files – common variable name
- Data quality checking – central document created
- Importance of keeping an accurate dated log book
- SYNTAX

Codebook for Trends File

var	Label	Values				
HBSC	hbsc Year	2010=2010 survey	2006=2006 survey	2002=2002 survey	1998=1998 survey	
tid1	school identifier					
tid2	class identifer					
tid3	student idenfier					
tid4	health board	1=southern	2=nd western	3=western	4=north western	5=midland
tid5	Level	1=primary	=secondary			
t1	gender	1 = boy	2 = girl			
t2	grade	1=3rd class	2=4th class	3=5th class	4=6th class	5=1st year
t3	month of birth	1=Jan	2=Feb	3=March	4=Apr	5=May
t4	year of birth	9999=d/k missing				
t5	weekly pocket money	999.99 = d/k missing				
t6	breakfast (weekdays)	1=never	2=one day	3=two days	4=three days	5=four days
t7	breakfast (weekends)	1=never	2 =one day	3=both days	9=d/k missing	
t8	eat fruit	1=never	2=less than once a week	=once a week	4=2-4 days a week	5=5-6 days a week
t9	eat vegetables	1=never	2=less than once a week	3= once a week	4=2-4 days a week	5=5-6 days a week
t10	eat sweets	1=never	2=less than once a week	3=once a week	4=2-4 days a week	5=5-6 days a week
t11	drink soft drinks	1=never	2=less than once a week	3=once a week	4=2-4 days a week	5=5-6 days a week
t12	diet soft drinks	1=never	2=less than once a week	3=once a week	4=2-4 days a week	5=5-6 days a week
t13	eat crisps	1=never	2=less than once a week	3=once a week	4=2-4 days a week	5=5-6 days a week
t14	eat chips/fried potatoes	1=never	2=less than once a week	3=once a week	4=2-4 days a week	5=5-6 days a week
t15	go to school/bed hungry	1=always	2=often	3=sometimes	4=never	9=d/k missing
t16	brush teeth	1=more than once a day	2=once a day	3=at least once a week but not daily	4=less than once a week	5=never
t17	on a diet	1=no, my weight is fine	2=no, but I should lose some weight	3=no, beacuse I need to lose weight	4=yes	9=d/k missing
t18	PA last 7 days	0=0 days	1=1 day	2=2 days	3=3 days	4=4 days
t19	ever smoked	1=yes	2=no	9=d/k missing		
t20	how often smoke at present	1=every day	2=at least once a week, but not every day	3=less than once a week	4=do not smoke	9=d/k missing
t21	beer	1=every day	2=every week	3=every month	=rarely	5=never
t22	wine	1=every day	2=every week	3=every month	4=rarely	5=never
t23	spirits	1=every day	2=every Treek	3=every month	4=rare	5=never
t24	alcopops	1=every day	2=every week	3=every month	4=rarely	5=never
t25	cider	1=every day	2=every week	3=every month	4=rarely	5=never

INDICATOR (main report)	Variable Name	Syntax Checked	Trends Checked	Figures in Tables Checked	Graphs Checked	International Checked
Easy to talk to mother	t1r	√	√	√	√	√
Easy to talk to father	t3r	√	√	√	√	√
Live with both parents	livewithboth		√	√	√	n/a
Liking school	t36r	√	√	√	√	√
Organise school events	t40r	√	√	√	√	n/a
Pressured by schoolwork	t41r	√	√	√	√	√
Teachers treat students fairly	t94r	√	√	√	√	n/a
3+ close friend (same gender)*	closefriend_r	√	√	√	√	n/a
4+ evenings with friends	t132r	√	√	√	√	√
E-communication	t133r	√	√	√	√	√
Talk to friend of same sex	t86r	√	√	√	√	n/a
Feel safe local area	t124r	√	√	√	√	n/a
Good places to go	t127r	√	√	√	√	n/a
Can ask for help	t128r	√	√	√		n/a
Current smoker	t20r	√	√	√	√	√
Been drunk	t26r	√	√	√	√	√
Cannabis use last 12 months	t28r	√	√	√	√	√
Age of first cigarette	age11, age13, age15	√		√	√	

Analysis Plan

- 4 data cycles

- Cross-sectional – different respondents

- Most appropriate analytical approach – inconsistent advice from literature

- Sought advice from international colleagues

- Binary logistic regression utilising repeated measure function

- 'HBSC' – study year treated as an independent variable

Software

- SPSS

- STATA

- MLWin

- Pros and cons of each.....

Statistical analysis to determine differences over time

- Logistic regression model for each indicator

- Variable 'HBSC survey year' treated as predictor

- Provides overall significance value for earliest survey year (1998 or 2002) and the most recent (2010)

- Repeated contrast function for 'HBSC survey year'

- Age, gender and social class are included in model (so findings are statistically significant 'above and beyond' the differences by age, gender and sc

Table 7.1   Summary of findings in HBSC Ireland Trends 1998-2010; direction of statistically significant differences between rounds of data collection

	Overall (1998-2010)	1998-2002	2002-2006	2006-2010
Communication with mother	(↑)	(↑)	(↑)	(-)
Communication with father	(↑)	(↑)	(↑)	(↑)
Living with parents	(↓)	(↓)	(↓)	(↓)
Pressured by school work	(↑)	(↑)	(↑)	(↓)
Teachers treat students fairly	(↑)	(↑)	(↓)	(↑)
4+ evenings with friends	(↑)	(↑)	(-)	(↓)
Talk to friend of same sex	(↑)	(-)	(-)	(-)
Current Smoker	(↓)	(↓)	(↓)	(↓)
Ever been drunk	(↓)	(-)	(↑)	(↓)
Cannabis use last 12 months	(↓)	(-)	(-)	(↓)
Bully others	(↓)	(↓)	(-)	(↓)
Tooth brushing	(↑)	(↑)	(↑)	(↑)
Seatbelt	(↑)	(↑)	(↑)	(↑)
Exercise 4+ days per week	(↓)	(↓)	(↑)	(↓)
Headache	(-)	(-)	(-)	(-)
Feeling low	(↑)	(↑)	(↓)	(-)
Times injured	(↓)	(↑)	(↓)	(↓)
Happy with life	(↑)	(↑)	(↑)	(-)

(↑): indicates an increase

(↓): indicates a decrease

(-): no statistically significant change over time

Available on the online Appendix: http://www.nuigalway.ie/hbsc/documents/hbsctrends2013.pdf

An aside……my PhD study

- The lack of consistent advice on methodological approach on carrying out trends analysis using cross-sectional data….

- Systematic review – 1st paper of PhD

- N=276 papers under review

- Focus on analytical framework, data analysis, presentation of trends

- Provide theoretical/methodological approach for trends analysis

International trends

- Present the overall % of 15 year olds from Ireland, the minimum and maximum % internationally as well as the HBSC international average

- The last row in each table presents the ranking of Ireland based on the 27 countries that have participated in all four survey rounds since 1998.

EXAMPLE:

Table 4.2 International data summary - currently smoking, 15 year olds, 1998-2010, overall and by gender

	OVERALL				BOYS				GIRLS			
	1998*	2002	2006	2010	1998*	2002	2006	2010	1998*	2002	2006	2010
HBSC 27 min	22.5	18.3	13.0	16.0	22.9	18.0	10.6	13.6	15.3	16.4	9.3	8.7
HBSC 27 max	60.5	67.7	46.6	59.1	53.8	59.2	38.8	54.9	67.7	73.7	54.2	62.9
HBSC 27 mean	32.8	31.1	24.2	23.5	32.6	30.9	23.7	23.5	33.0	31.2	24.8	23.4
Ireland	32.9	26.5	24.2	17.2	32.9	26.2	23.2	15.8	32.8	26.7	25.4	18.9
Ireland Rank	12	20	13	23	11	18	14	26	15	19	15	22

*England not included (different coding)

Social class – considerations

- Historically presented social class of father – in absence of father, mother was used.

- For this report, social class was determined by using the highest social class available for each respondent.

- This is similar to the approach used by the CSO where sc of dependents under 15 is determined by the highest social class in the house.

MAIN FINDINGS

Main Trends

The good news

- Increases in fruit and vegetable consumption, use of seatbelts, excellent health, happiness, life satisfaction, tooth brushing, communication with mother and father, liking school and (most) positive school perceptions, local area

- Decreases in smoking, drunkeness, cannabis use, bullying others, injuries, consumption of soft drinks and crisps

The less good news

- Increases in feeling pressured by school work, feeling low, stomach-ache and back ache, local area is run down

- Decreases in exercise, thinking local area is well off

- No changes since 1998 in headaches, feeling nervous, having been bullied or feel safe in local area

Other trends

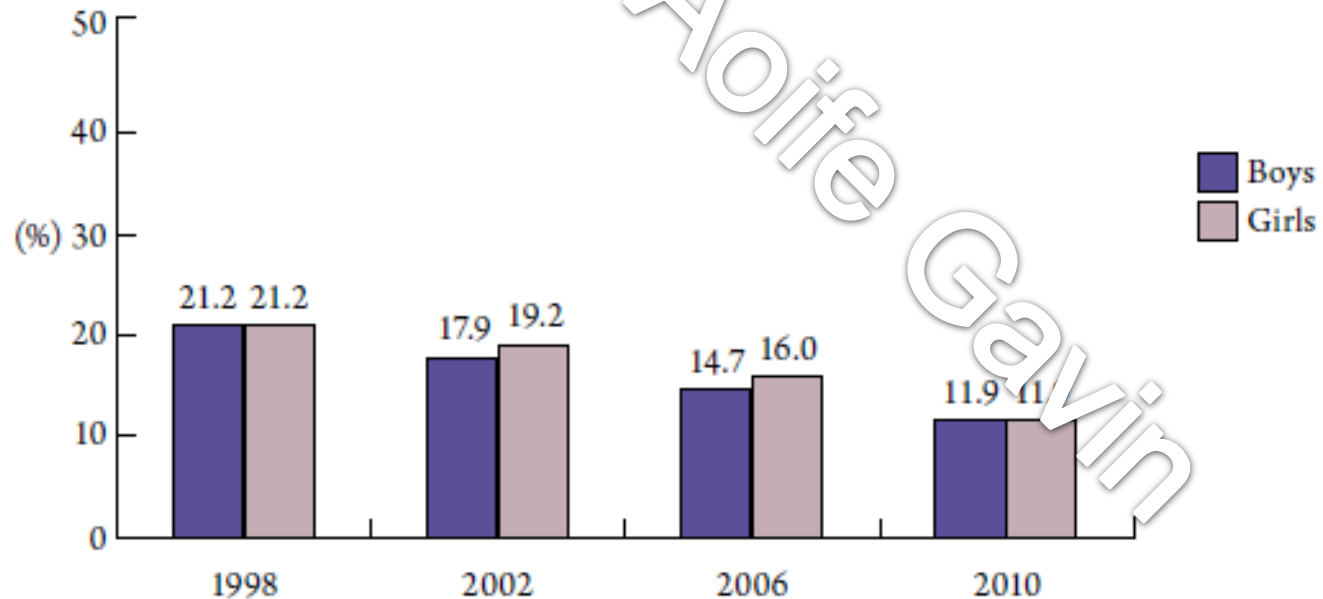- Increases in e-communication, decreases in living with both parents

Currently Smoking

Percentage of young people who reported they currently smoke by gender, age group, social class and year, 1998-2002

	1998	2002	2006	2010
Overall	21.2	18.6	15.3	11.9

Figure 4.1   Percentage of young people who reported they currently smoke, 1998-2010, by gender

Ever been drunk

Table 4.4   Percentage of young people who reported they had ever been drunk by gender, age group, social class and year, 1998-2010

	1998	2002	2006	2010
Overall	29.3	31.2	32.4	28.3
Girls				
All	24.0	30.1	29.4	26.8
10 to 11	5.4	3.0	1.6	2.9
12 to 14	17.2	17.2	16.3	14.6
15 to 17	48.9	56.4	55.9	51.9
Boys				
All	34.8	32.7	35.2	29.7
10 to 11	15.3	6.7	6.7	5.1
12 to 14	28.1	22.1	22.1	18.0
15 to 17	57.1	59.7	57.2	52.8
Girls				
SC 1-2	22.5	29.0	28.6	25.0
SC 3-4	24.3	31.2	30.7	26.3
SC 5-6	24.7	31.1	26.7	31.8
Boys				
SC 1-2	35.8	33.4	32.2	27.9
SC 3-4	34.3	30.9	35.0	29.0
SC 5-6	31.5	34.3	34.3	31.2

On a diet

Table 4.10 Percentage of young people who reported they are currently on a diet or doing something else to lose weight, by gender, age group, social class and year, 2002-2010

	1998	2002	2006	2010
Overall	-	13.1	11.5	13.2
Girls				
All	-	17.9	14.9	16.9
10 to 11	-	7.2	8.3	9.5
12 to 14	-	6.5	8.3	9.9
15 to 17	-	6.3	8.5	9.6
Girls				
SC 1-2	-	18.4	15.4	16.3
SC 3-4	-	18.5	14.7	17.7
SC 5-6	-	15.3	14.9	19.6
Boys				
SC 1-2	-	6.3	7.1	8.9
SC 3-4	-	6.6	9.9	11.0
SC 5-6	-	9.1	8.6	8.6

Statistically significant vs. Practically significant

Seatbelt Use

Figure 4.9 Percentage of young people who reported they 'always' wear a seatbelt, 1998-2010, by gender

Communication with father

Percentage of young people who reported they find it 'easy' or 'very easy' to talk to their father about things that really bother them, by gender, age group, social class and year 1998-2010

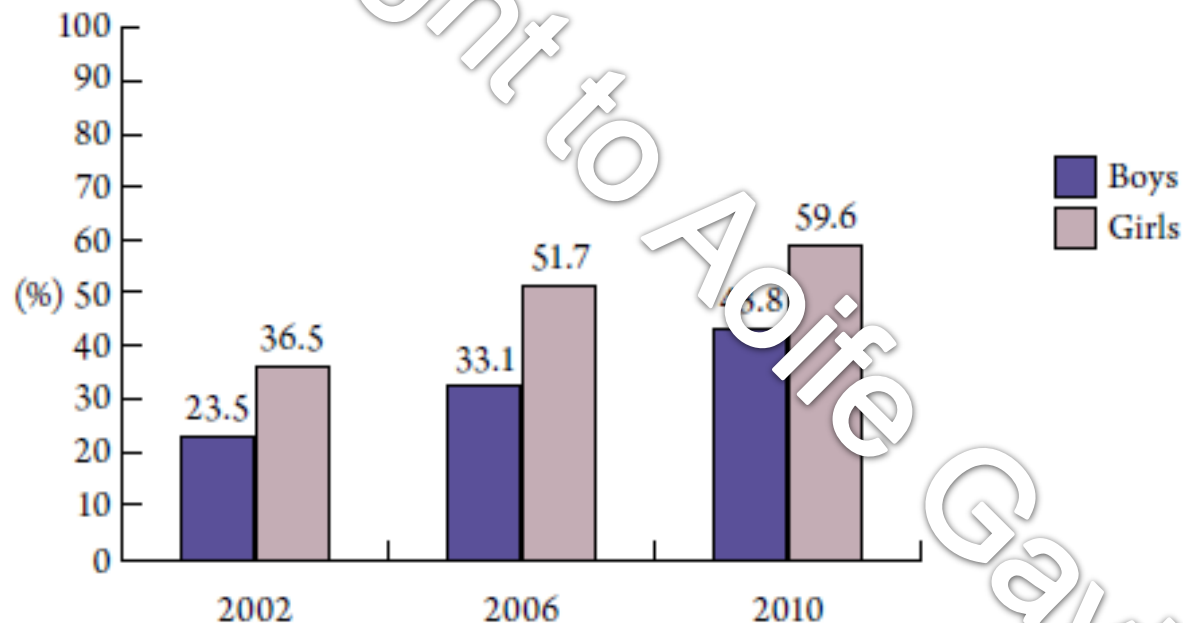|	1998	2002	2006	2010
Overall	8.0	56.2	64.1	66.7
Girls				
All		50.4	56.6	59.8
10-11	54.3	64.4	71.4	69.0
12-14	43.0	5	59.6	60.9
15-17	31.7		46.6	54.1
Boys				
All	54.3	64.0	71.1	73.2
10-11	67.1	79.7	83.5	81.9
12-14	57.0	66.1	76.	76.6
15-17	41.7	53.2	62.3	65.6
Girls				
SC 1-2	40.8	51.0	58.2	
SC 3-4	44.3	50.4	54.6	59.
SC 5-6	41.3	47.7	55.7	56.2
Boys				
SC 1-2	51.4	63.1	70.5	73.5
SC 3-4	54.9	63.8	70.7	73.8
SC 5-6	57.0	65.0	72.4	72.5

Living with both parents

Figure 6.3 Percentage of young people who reported they currently live with both their mother and father, 1998-2010, by gender

E-communication – change in question

Figure 6.10 Percentage of young people who reported they talk to their friend(s) on the phone or send them text messages or have contact through the Internet 'every day', 2002-2010, by gender

HBSC 1998-2010

- Provides an excellent opportunity to document children's health related behaviours and contexts over time

- There is good news on many fronts – substance use, healthy eating, self-perceptions, family and peer relationships, school and local community perceptions

- Need to further investigate negative trends, improve measures and ensure the information gets to those who can use it to improve children's lives further

Acknowledgements

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All member of the HBSC International network

All researchers and students who have worked with us since 1997

HBSC Team Members

- Dr. Saoirse Nic Gabhainn (Lead Principal Investigator)
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QUESTIONS?

LINK TO THE REPORT:
ttp://www.nuigalway.ie/hbsc/documents/hbsctrends2013.pdf