

Contextual socio-demographic and lifestyle factors associated with early sexual initiation among adolescents in Ireland

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Adolescent sexual behaviour

- Sexual activity begins between 15 and 19 years for most young people worldwide
 - ◆ Ireland - median age is 17 years
- The only nationally representative Irish data (HBSC):
 - ◆ 26.1% reported engagement in sexual intercourse (15-18 years)
 - ◆ 21.2% reported initiating sexual intercourse before age 17 years
 - ◆ 3.2% boys & 1.3% girls were sexually active before age 14 years

(Layte et al, 2006).

(Young, Burke & Nic Gabhainn,, 2013).

Early sexual initiation

- Early sexual initiation associated with:
 - ◆ Intercourse with high risk partners
 - ◆ Multiple sexual partners
 - ◆ STI transmission
 - ◆ Sexual and physical violence.
- Studies among Irish adults have associated early sexual initiation with:
 - ◆ ↓ having used contraception
 - ◆ ↓ having planned intercourse
 - ◆ ↑ regretting the timing



(Bride et al, 2012; Layte et al, 2006).

Rationale

- A more detailed understanding of the factors influencing early sexual initiation among adolescents in Ireland is required
- To contribute to the knowledge base on adolescent sexual behaviour in Ireland and to inform future sexual health promotion policy and initiatives.

Defining early sexual initiation

- Physical maturity
- Cognitive development
- Social norms
- Data available
- Number of different cut-offs employed



HBSC Ireland 2014

94 post-primary schools
recruited (RR 59%)

4,036 participants
aged 15-17 years

879
sexually
active

436
Boys

443
Girls

Analysis

- Sexually active 15-17 year olds: N=879 (436 boys, 443 girls)
- SPSS 22.0 software package
- Issues with dataset:
 - ◆ Too many variables of interest
 - ◆ Missing responses

Analysis plan

- Identify suitable socio-demographic and lifestyle variables
- Multiple imputation – *missing values*
- Exploratory factor analysis – *explore dimension reduction*
- Created variable scales – *reduce number of variables*
- Multiple linear regression – *explore predictors*

Measures

Independent variable

- Age at first sexual intercourse

Confounding variables

- Social class
- Gender

- 11 years old or younger
- 12 years old
- 13 years old
- 14 years old
- 15 years old
- 16 years old
- 17 years old or older

Themes/topics

- Based on previously associated factors and factors amenable to intervention
 - ◆ Risk behaviours
 - ◆ Environment
 - ◆ School
 - ◆ Health behaviours
 - ◆ Peers
 - ◆ Self-perception
 - ◆ Family
 - ◆ Health status



Missing responses

■ Multiple imputation

- ◆ Currently considered a reliable method of dealing with missing data (Tabachnik & Fidell, 2013)
- ◆ Does not require MCAR (Missing Completely At Random) data
- ◆ Can be used for any form of GLM analysis (regression, ANOVA)
- ◆ Replaces missing values based on a number of different iterations
- ◆ Manually averaging data to get pooled R , R^2 , ΔR^2
- ◆ Necessary to standardize variables ahead of analysis in order to get pooled Beta

Exploratory factor analysis

Risk Behaviour

how often do you smoke tobacco at present
how frequently smoked cigarettes last 30 days
smoked cigarettes (lifetime)
cannabis use (lifetime)
cannabis use (last 30 days)
age when first took cannabis
drunk drunkenness (last 30 days)
drunk alcohol (last 30 days)
drunkenness (lifetime)
alcohol (lifetime)
age when first got drunk
age when first drink alcohol
age when first smoke a cigarette

**Factor
Analysis**



Factor 1
(Tobacco or cannabis
use)

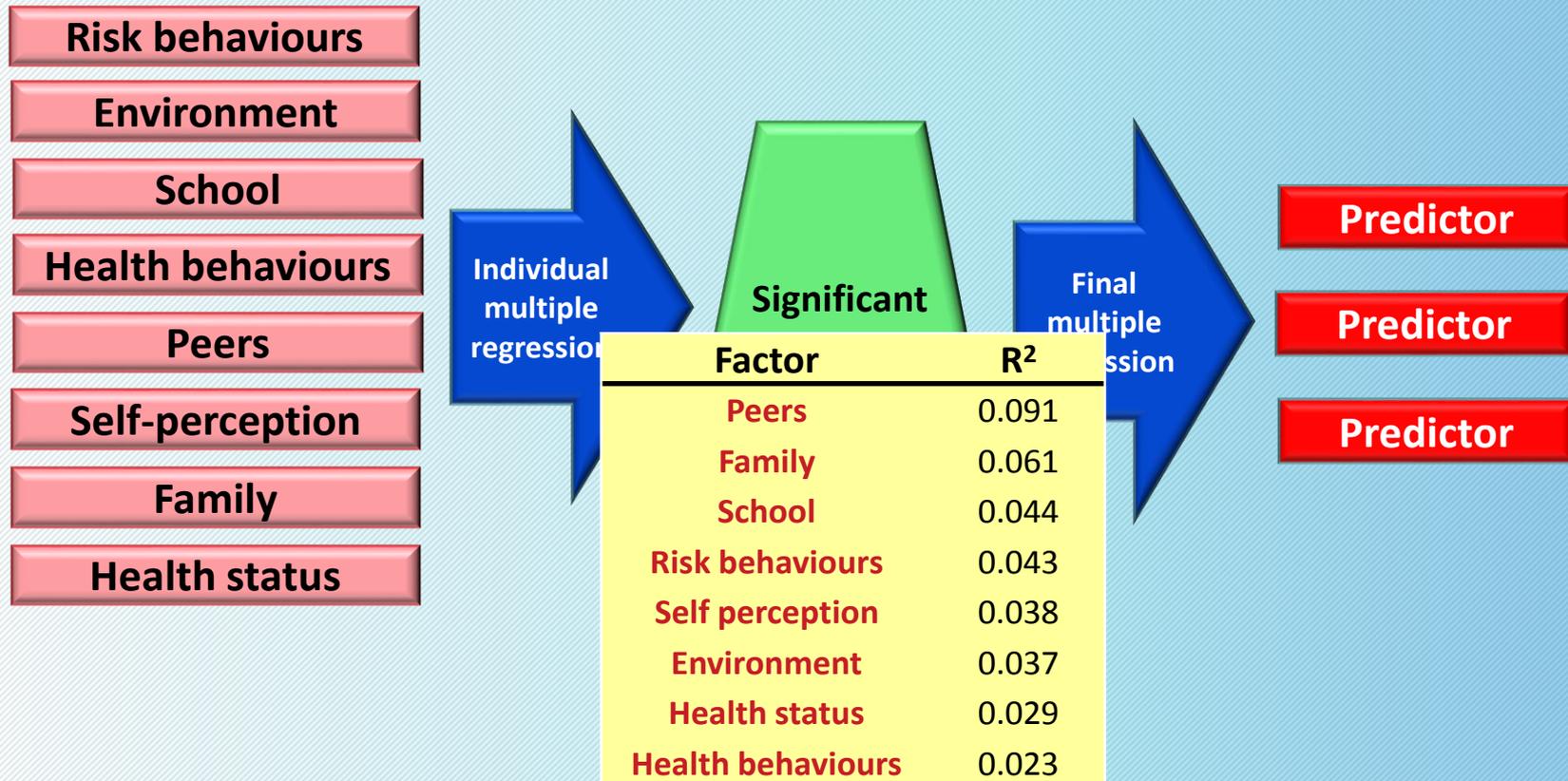
Factor 2
(Alcohol use or
drunkenness)

Factor 3
(Risk behaviours
initiation)

Multiple linear regression

- Separate analysis for boys and girls
- Variables and variable scales initially entered into individual regression analysis according to themes
- Significant predictors ranked based on R^2 values
- Final predictors entered into hierarchical stepwise linear regression

Multiple linear regression



Results - boys

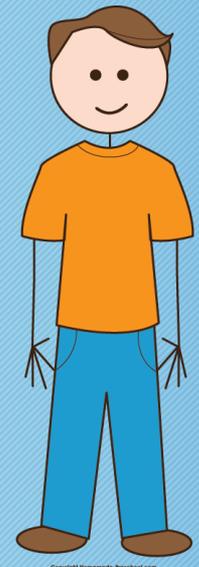
▪ Hierarchical multiple regression

Model	Predictor themes	R	F	R ²	ΔR ²
1	Social class	.13	6.82**	.02	.02
2	Peers	.23	8.05***	.05	.04
3	Family	.26	7.76**	.07	.01
4	School	.28	6.99	.08	.01
5	Risk behaviours	.30	6.79*	.09	.01
6	Self perception	.30	5.85	.09	.00
7	Environment	.30	5.21	.09	.00

* $p < .05$, ** $p < .01$, *** $p < .001$

▪ Significant predictors

- ◆ Number of close male friends ($\beta = .156$, $p = .019$)
- ◆ Tobacco or cannabis use ($\beta = -.121$, $p = .030$)



Results - girls

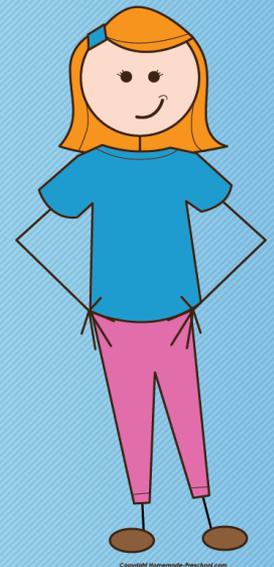
▪ Hierarchical multiple regression

Model	Predictor themes	R	F	R ²	ΔR ²
1	Social class	.04	0.72*	.00	.00
2	Risk behaviours	.42	29.48**	.18	.17
3	School	.43	23.57*	.19	.01
4	Health behaviours	.44	19.99*	.19	.01
5	Health status	.45	14.70	.20	.01
6	Peers	.45	12.87	.20	.00
7	Environment	.45	11.45	.20	.00

* $p < .05$, ** $p < .01$, $p < .001$

▪ Significant predictors

- ◆ Alcohol use or drunkenness ($\beta = .315$, $p < .001$)
- ◆ Smoking or alcohol initiation ($\beta = .394$, $p < .001$)



Conclusion

- Difference in factors that predict early sexual initiation for boys and girls
- Contextual sociodemographic and lifestyle factors stronger predictors for age of sexual initiation among girls
- Highlights environments and other behaviours to target for interventions around early sexual initiation
 - Risk behaviours
 - Health behaviours
 - School, home and peer environments.

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References

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Questions???