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Sex education, first sex and sexual health outcomes in adulthood: Findings from a nationally representative survey.

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RCSI Research Day 2013

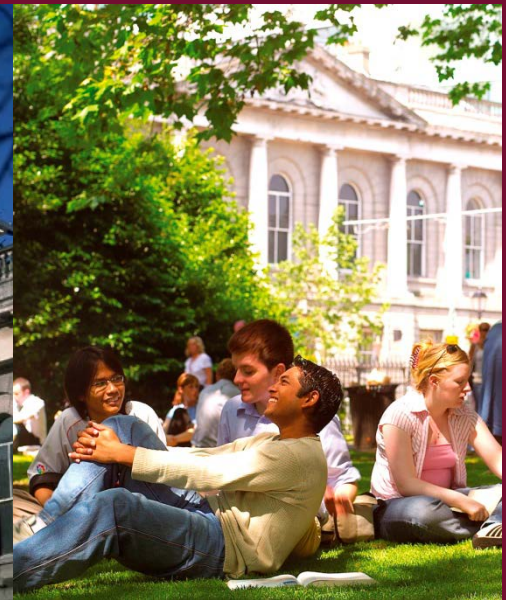
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Coláiste Ríoga na Máinleá in Éirinn



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Sex education, first sex and sexual health outcomes in adulthood: Findings from a nationally representative survey

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Project Aims



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ROYAL COLLEGE OF SURGEONS IN IRELAND

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- *Project title: Exploring trends in sexual activity, contraceptive use, and pregnancy experiences in Ireland: a secondary analysis of national survey data from the last decade*

Two main questions we aim to answer...

1. Is sex education effective in delaying first sexual intercourse and encouraging contraception use on this occasion?
2. Is receiving sex education related to sexual health outcomes/behaviours in later life and does the context of first sex have any role in this relationship?

Definitions



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- *Formal sex education* – sex education received either at home and/or school
- *Age of consent* – in Ireland the age of consent is 17 years
- *Early first sex* – heterosexual intercourse before the age of consent
- *Context of first sex* – age and use of contraception at first sex
- *Crisis pregnancy* – a pregnancy that represents a personal crisis or emotional trauma for the individual

Is early first sex common?



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- Average age of first sexual intercourse is similar across developed countries, approximately 17.5-18 years of age (Darroch et al., 2001, Hawes et al., 2010)
- **UK** – 30% of men and 26% of women had their first heterosexual experience prior to the age of consent in UK - 16 years (Wellings et al, 2001)
- **Ireland** – 28% of men and 17% of women had their first heterosexual experience prior to the age of 17 years (i.e., the legal age of consent) (McBride, Morgan & McGee, 2012)



Why is early sexual activity a concern?



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- *Research indicates:*

- a link between *early* first sexual intercourse and negative sexual health behaviours and outcomes in later adulthood

- increased number of partners
- inconsistent condom use
- unintended pregnancy
- diagnosis of sexually transmitted infections (STIs)

(Coker et al., 1994; Sandfort et al., 2008)

- In **Ireland**, early first sex has been linked with

- inconsistent contraception use in past year
- experience of crisis pregnancy (Rundle et al., 2004)



Is sex education effective?



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- *Research indicates:*
 - Receiving sex education while growing up:
 - ✓ Delays timing of first sex
 - ✓ Improves the likelihood of using contraception on this occasion (Kirby, Laris & Roller, 2007; Mueller, Gavin & Kulkarni, 2008)
- Less consistent findings for a link between sex education and later sexual health behaviours
 - may be dependent on type of education (Yu, 2010)
- Relationship between sex education and longer term outcomes may operate through older age at the time of first sex (Lindberg & Maddow-Zimet, 2012)



Survey: Irish Contraception and Crisis Pregnancy Study 2010 (ICCP-2010)

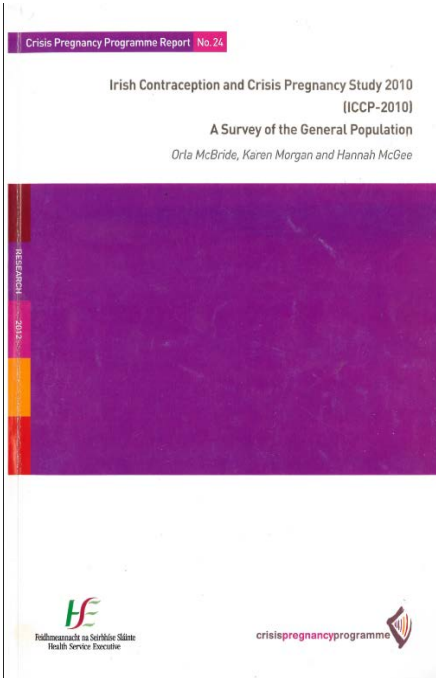


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- Irish cross-sectional telephone survey of adults aged 18-45 years (n = 3002) (McBride et al, 2012)
- Designed to assess knowledge, attitudes and behaviours in relation to sex, contraception and pregnancy
- Quota sampling i.e. sample representative of the general population
- Recruitment via mobile and landline telephones using random digit dialling (RDD)
 - 69% response rate



- ❖ Research qtn 1: Multinomial regression
 - Formal sex education
 - Context of first sex
 - Age and contraception use
- ❖ Research qtn 2: Structural Equation Modelling
 - Formal sex education & Context of first sex
 - Adult sexual health behaviours
 - Contraception use in past year
 - History of STI testing
 - Experience of crisis pregnancy



Results: Sex Education Profile



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- 70% (n=2123) adults reported receiving formal sex education
- 53% were women
- 63% received sex education from school and 32% in the home and 5% said both





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Research Question 1:

Is sex education effective in delaying first sexual intercourse and encouraging contraception use on this occasion?

Regression Analyses: Sex education and first sex



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- Multinomial Regression: 4 risk categories:
 1. Before age 17: contraception not used (n=414) (*reference group*)
 2. Before age 17: contraception used (n=397)
 3. Age 17+: contraception not used (n=429)
 4. Age 17+: contraception used (n=1758)

Unweighted relative risk ratios from multinomial regression analysis explaining association between receipt of sex education and age and contraception use at first sex (n=2,998)



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	Relative Risk Ratio	95% CI	P value
Before 17 years: contraception not used (n=414) (reference)	-----	-----	-----
<i>Received sex education</i>			
<i>Before 17 years: contraception used (n=397)</i>	1.62	1.16-2.26	.005
<i>Age 17+ years: contraception not used (n=429)</i>	0.90	0.66-1.21	.471
<i>Age 17+ years: contraception used (n=1758)</i>	1.52	1.18-1.96	.001

Note. Controlled for gender, current age, social class, current relationship status, education and religiosity.

Summary: Sex education and first sex



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- Sex education was significantly associated with increased contraception use for those who had sex before aged 17 years (**RRR=1.62, $p<0.01$**)
- Sex education was significantly associated with both older age at first sex and increased contraception use on this occasion (**RRR=1.52, $p<0.01$**)



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Research Question 2:

Is receiving sex education related to sexual health outcomes/behaviours in later life and does the context of first sex have any role in this relationship?

Structural equation modelling: Direct & indirect effects of sex education



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- No indirect effects were found
- Formal sex education had a significant direct effect on:
 - **use of contraception during first sexual intercourse**
($\beta = .16, p < .001$)
 - **use of contraception over the previous year**
($\beta = .12, p < .01$)
 - **the experience of a crisis pregnancy**
($\beta = -.09, p < .01$)
- Formal sex education had no effect on STI screening

Structural equation modelling: Direct & indirect effects of sex education



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- Younger age at first sex was a significant predictor of:
 - **the experience of a crisis pregnancy** ($\beta = .08, p < .001$)
 - **STI testing** ($\beta = .08, p < .001$).
- Use of contraception during first sexual intercourse was significantly associated with:
 - **the use of contraception over the past year**
($\beta = .09, p < .001$)
 - **the experience of a crisis pregnancy**
($\beta = -.14, p < .001$).

Summary of key findings



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- **Receipt of formal sex education** has a clear protective influence on the context of first sex and is also associated with
 - an increased likelihood of using contraception in last year
 - reduced likelihood of a crisis pregnancy
- The **context of first sex** influenced later sexual health behaviours:
 - Those **aged under 17 years at first sex** were more likely have experienced a crisis pregnancy and to have had a STI test
 - **Use of contraception at first sex** was associated with an increased likelihood of using contraception in last year and the reduced likelihood of a crisis pregnancy



Conclusions and implications



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1. Targeted interventions in terms of sex education should focus on:
 - Young people before they engage in first sex
 - The context of first sex i.e. Age and contraception use
2. Vulnerable groups at risk for *early* first sex should be a particular target for sex education e.g. early school leavers
3. Longitudinal and further cross-sectional research on the influence of sex education on sexual health behaviours in adulthood is merited, including whether age at first sex influences this relationship

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Sex Education Questions: ICCP 2010



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- **B2a: Thinking about when you were growing up (about age 10-16 years) did you receive sex education on?**
 - Sex and sexual intercourse
 - Sexual feelings, relationships and emotions
 - Contraception
 - Safer sex/sexually transmitted infections
- **B2b. Where did you receive this education?**
 - Home
 - School
 - Other

Structural equation of model of direct & indirect effects of sex education I



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