

1-3-2013

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

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## Citation

Kelleher C, Bourke A, Boduszek D, McBride O, Morgan K. Sex education, first sex and sexual health outcomes in adulthood: Findings from a nationally representative survey. Oral presentation at: Royal College of Surgeons in Ireland Research Day; 2013 March 5; Royal College of Surgeons in Ireland, Dublin: 2013.

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# RCSI Research Day 2013

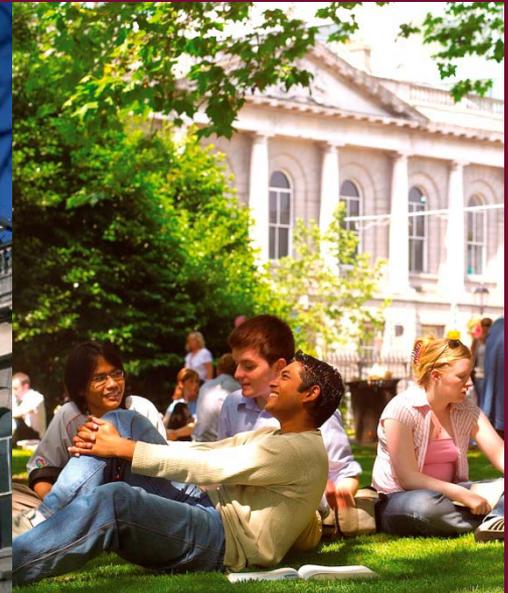
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## Sex education, first sex and sexual health outcomes in adulthood: Findings from a nationally representative survey

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# Project Aims



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- *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)



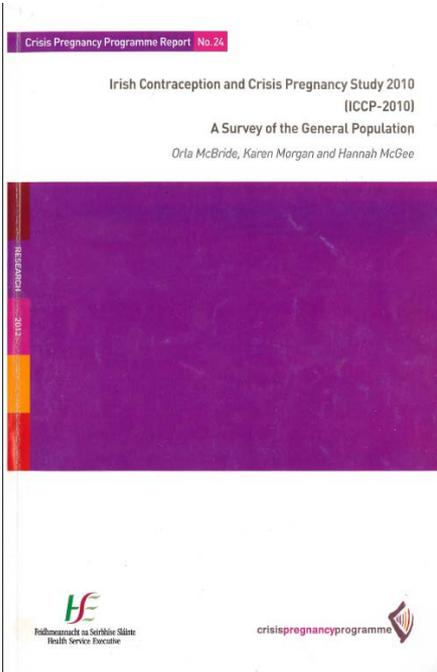
# Survey: Irish Contraception and Crisis Pregnancy Study 2010 (ICCP-2010)



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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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	<b>Relative Risk Ratio</b>	<b>95% CI</b>	<b>P value</b>
Before 17 years: contraception not used (n=414) ( <b>reference</b> )	-----	-----	-----
<b><i>Received sex education</i></b>			
<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

# Acknowledgements



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## *Project team 2012:*

Karen Morgan (PI)  
Caroline Kelleher  
Orla McBride  
Ashling Bourke  
Daniel Boduszek  
Gemma Smith

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Hannah McGee  
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Frances Shearer  
Roger Ingham  
Aidan O' Hora  
Stephanie O' Keeffe

## **Funders:**



# 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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