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

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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

- **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

- **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?

- 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?

- **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?

- **Research indicates:**
  - Receiving sex education while growing up:
    - Delays timing of first sex
    - Improves the likelihood of using contraception on this occasion (Kirby, Laris & Rolleri, 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)

- 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
Analyses

- 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

- 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
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

• 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)

<table>
<thead>
<tr>
<th>Relative Risk Ratio</th>
<th>95% CI</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before 17 years: contraception not used (n=414) (reference)</td>
<td>1.62</td>
<td>1.16-2.26</td>
</tr>
<tr>
<td>Received sex education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 17+ years: contraception not used (n=429)</td>
<td>0.90</td>
<td>0.66-1.21</td>
</tr>
<tr>
<td>Age 17+ years: contraception used (n=1758)</td>
<td>1.52</td>
<td>1.18-1.96</td>
</tr>
</tbody>
</table>

Note. Controlled for gender, current age, social class, current relationship status, education and religiosity.
Summary: Sex education and first sex

- 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)
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

• 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
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

- **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

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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Funders:
Sex Education Questions:
ICCP 2010

• **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

- **X1**: Sex Ed
- **X1**: Age at first sex
- **X1**: Contra. at first sex
- **X1**: History of STI testing
- **X1**: Crisis pregnancy
- **X1**: Education
- **X1**: Religiosity
- **Contra. at first sex**: Contraception used in last year

The diagram illustrates the relationships between these variables, indicating pathways for direct and indirect effects.