CONDOM USE AT SEXUAL DEBUT AMONG CHINESE YOUTH: FINDINGS FROM A NATIONAL SURVEY

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1. Background

- Among sexually active youth engaging in intercourse without contraception
  - a high unintended pregnancy rate (Finer et al. 2006)
  - a sharp rise in STIs/HIV/AIDS (Chen and Hearst 2004)

- Out of all contraception methods, the condom is the
  - most common (Abma, Copen, and Martinez 2010)
  - only method (Cates and Steiner 2002)

providing simultaneous protection against risks—having unintended pregnancies/contracting STIs.
1. Background (con’t)

- 161 million unmarried youth (aged 15-24) in China, but little is known about their sexual behaviors (Zheng et al. 2010).

- Previous studies in Chinese youth based on area or regional samples do not offer generalizable findings in a national context (Briere 1992; Eisenhardt 1989).

- Our study focuses on filling this gap in the literature by exploring the determinants of condom use at sexual debut among Chinese youth aged 15-24.
2. Methods

2.1 Data

2.2 Dependent Variable

2.3 Independent Variables

2.4 Statistical Methods
2.1 Data

- *The National Youth Reproductive Health Survey*
  - conducted from late 2009.
  - target population: unmarried youth aged 15 to 24 in 30 provinces, autonomous regions, and municipalities of mainland China.

- Three subpopulations: household youth, school youth, and youth living in collective households.

- The study consists of 22,288 respondents with a high 99% response rate.
2.1 Data (con’t)
2.2 Statistical Methods

- **Conceptualization**: youth decide first whether to have sex. If s/he decides to have sex, s/he then decides whether to use condom (Brauner-Otto and Axinn 2010).

- **Selection Bias**: In our research, the outcome on condom use can be observed only for a restricted sample, 22.4% of the full sample, who have had their first sex.

- **Heckman’s selection model**: a probit equation to control for selectivity (Heckman 1979). First constructing a selection model (whether the respondents experienced their first sex or not) and then construct the outcome model to examine the effects of the independent variables.
In First Regression (Selection Equation)
Occurrence of first sexual intercourse

- Constructed from the question:
  "How old were you (in years) when you had sexual intercourse for the very first time?"

- Dichotomous, 1 “having had first sexual intercourse “ and 0 “Otherwise”.
2.3 Dependent Variables (con’t)

In Second Regression (Outcome Equation)
Condom use at first sexual intercourse

- Constructed from the question:
  “During the first sexual intercourse, have your partner or you ever used condom?”

- Dichotomous, 1 “used condom at their first sexual intercourse” and 0 “Otherwise”.
2.3 Independent Variables

- The analysis considers respectively variables that have well-established effects on the sexual debut and condom use at first sex in the selection model and outcome model.

- The selected key variables are: gender, age, family structure, parental education, household registration status (*hukou*), regional setting, formal sex education, educational attainment, and religious orientation and other Relationship and Partner Characteristics.
3. Results

Individual-level and Familial-level characteristics

Relationship and Partner’s characteristics
Table 1 Estimated Parameters of Heckman’s Selection Model of Condom Use at Sexual Debut Among Chinese Youth Aged 15-24

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Selection Equation</th>
<th>Outcome Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age at sexual debut</td>
<td>Coef.</td>
<td>Coef.</td>
</tr>
<tr>
<td>Early adulthood</td>
<td>—</td>
<td>0.478 ***</td>
</tr>
<tr>
<td>Late adolescence</td>
<td>—</td>
<td>0.270 **</td>
</tr>
<tr>
<td>Middle adolescence</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Boy/girlfriend (1=yes)</td>
<td>—</td>
<td>0.328 ***</td>
</tr>
<tr>
<td>Consensual sex (1=yes)</td>
<td>—</td>
<td>0.257 ***</td>
</tr>
<tr>
<td>Talked about contraception before first sex (1=yes)</td>
<td>—</td>
<td>1.267 ***</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.088 ***</td>
<td>-1.436 ***</td>
</tr>
</tbody>
</table>

Rho 0.187 *

Log-Likelihood -11529.55

N 21272 4309

Note: All variables were coded as dummy indicators with “1” as “yes”, “0” otherwise.

*a Reference category.

*** p < .001  ** p < .01  * p < .05
Table 1 Estimated Parameters of Heckman’s Selection Model of Condom Use at Sexual Debut Among Chinese Youth Aged 15-24 (con’t)

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Selection Equation Coef.</th>
<th>Outcome Equation Coef.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Individual-level and Familial-level characteristics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male (1=Yes)</td>
<td>-0.173</td>
<td>-0.001</td>
</tr>
<tr>
<td>Age at the time of the interview</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early adulthood</td>
<td>1.585 ***</td>
<td>—</td>
</tr>
<tr>
<td>Late adolescence</td>
<td>0.711 ***</td>
<td>—</td>
</tr>
<tr>
<td>Middle adolescence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two biological parents (1=Yes)</td>
<td>-0.316 ***</td>
<td>0.023</td>
</tr>
<tr>
<td>Father’s educational attainment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>College diploma or higher</td>
<td>-0.224 ***</td>
<td>-0.218 *</td>
</tr>
<tr>
<td>Senior high school</td>
<td>-0.265 ***</td>
<td>-0.266 **</td>
</tr>
<tr>
<td>Junior high school</td>
<td>-0.266 ***</td>
<td>-0.331 ***</td>
</tr>
<tr>
<td>Elementary school or lower</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother’s educational attainment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>College diploma or higher</td>
<td>0.108 *</td>
<td>0.090</td>
</tr>
<tr>
<td>Senior high school</td>
<td>0.115 **</td>
<td>0.045</td>
</tr>
<tr>
<td>Junior high school</td>
<td>0.108 **</td>
<td>0.019</td>
</tr>
<tr>
<td>Elementary school or lower</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


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<thead>
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<th>Independent variable</th>
<th>Selection Equation Coef.</th>
<th>Outcome Equation Coef.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban (1=yes)</td>
<td>0.133 ***</td>
<td>0.178 ***</td>
</tr>
<tr>
<td>Living region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastern China</td>
<td>-0.080 *</td>
<td>-0.001</td>
</tr>
<tr>
<td>Central China</td>
<td>-0.176 ***</td>
<td>-0.015</td>
</tr>
<tr>
<td>Western China</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Received formal sex education (1=yes)</td>
<td>0.077 ***</td>
<td>-0.097 *</td>
</tr>
<tr>
<td>Educational attainment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>College diploma or higher</td>
<td>-0.130 ***</td>
<td>0.186 *</td>
</tr>
<tr>
<td>Senior high school</td>
<td>-0.037</td>
<td>0.173 *</td>
</tr>
<tr>
<td>Junior high school or lower</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other religion</td>
<td>-0.073</td>
<td>-0.499 ***</td>
</tr>
<tr>
<td>No religious orientation</td>
<td>-0.027</td>
<td>-0.202</td>
</tr>
<tr>
<td>Buddhism</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. Discussion

Conclusions

Discussion

Implications
4.1 Conclusion

- The results of our study, for the most part, confirm our expectations about the effects of the variables and their consistency with prior research.

- To a great extent, risky behaviors (unsafe sex without condom) prevailed among
  - young people who live in rural areas, and
  - have lower educational levels.

**Focus more**

Public policies that promote safe sex behavior
4.1 Conclusion (con’t)

- Important role of age: Delaying their sexual debut was a protective factor of initiating a safe sex using condom.

- Important role of characteristics within relationship and partners’ context: youth who
  - talked about contraception before first sex,
  - had a consensual first sex
  - were in a romantic relationship
have a greater probability of using condom at sexual debut.

Public practices

Reinforcing Youth’s ability to communicate
Thank you for the attention

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