



A Latent Class Analysis of Sexuality Education Type and Effect on Sexual Health Outcomes Among Adolescents in the United States: Results from a Nationally Representative Study

Nomi K. Sherwin MD¹, Andy Zervos MA¹, Debby Herbenick PhD MPH², Bryant M. Paul MA PhD³, Devon J. Hensel MS PhD^{1,4}

¹Section of Adolescent Medicine, Department of Pediatrics, Indiana University School of Medicine, Indianapolis IN

²Indiana University Bloomington, School of Public Health. ³Indiana University Bloomington, School of Media

⁴Department of Sociology, Indiana University Purdue University Indianapolis, Indianapolis, IN

Background

- Sex education is widely contested in public policy, but poorly studied
- Most current policies use three groupings: comprehensive, abstinence only, or none
- Few studies look at multiple sexual health outcomes as a result of type of sex education received

Methods

Data and Sample

- 2016 National Survey of Porn Use, Relationships, and Sexual Socialization
- Our sample: N=614, ages 14-17. Nationally representative study via IPSOS

Data Analysis

- Demographics, sex education receipt in school, and sexual health outcomes
- Procedures:
 - Descriptive statistics
 - Latent class analysis (Mplus)
 - Multinomial logistic regression (SPSS, v.28.0).
- Latent class solutions :
 - 1-8 classes tested
 - Predictive probabilities for subject coverage for each class determined to determine typology of sex education (Table 1)
 - Fit indices evaluated for best solution (Table 3)
- Sex education class membership was analyzed as behavioral predictor using Poisson regression for number of partners and ordinal regression for remainder of variables (Table 2)

Table 1: Percent of Class Membership Endorsing Coverage of Specific Sex Education Topics

	Comprehensive	Partially Comprehensive	STIs, Condom, OCP, Anatomy	STI, Condom, OCP	STIs, Anatomy	No sex education
STIs	100	93.7	98.3	70.9	52.8	0
Condom Use	94.4	84.9	71.6	52.5	0	0
Birth Control (OCPs)	90.4	87.5	92.6	65.4	7.7	0
Female Genitals	98.5	90.1	100.0	0	100.0	0
Male Genitals	98.3	83.5	97.7	11.4	84.3	0
Communication w/ parents	95.5	76.1	16.5	18.3	0.6	0
doctor	90.0	77.5	18.0	15.0	28.5	0
partner	93.8	38.0	5.6	12.2	0	0
Consent	100	76.8	47.6	15.2	25.5	0
Saying no to undesired sex	99.4	83.7	48.2	2	20.9	0
Saying yes to desired sex	85.8	34.5	6.9	1.2	0	0
Sexual orientation	100.0	44.5	28.8	14.6	1.9	0
Gender identity	96.1	35.6	14.7	13.1	7.5	0
Pornography	77.0	28.1	4.7	4.2	5.8	0
Sexual Pleasure	78.0	17.6	5.6	2.9	0	0
No topics	0	0	0	0	0	73.3

Table 2: Sexual Health Outcomes as a Function of Sex Education Received (OR, referent: No Sex Education)

	Comprehensive	Partially Comprehensive	STIs, Condom, OCP, Anatomy	STI, Condom, OCP	STIs, Anatomy
Recency of: Kiss	0.23*	0.36	0.53	0.33*	0.43*
Masturbation	0.38	0.35*	0.68	0.37*	0.61
Oral Sex	0.37	0.46	1.16	0.35*	0.58
Likelihood of having Received Sext	4.79*	2.19	1.14	3.50*	0.79

The following outcomes were found to be *nonsignificant*: relationship happiness, relationship satisfaction, number of partners in last year, or recency of receptive oral sex, vaginal sex, and condom use.

*significant, p < 0.05

Table 3: Fit Indices for Class Membership

	5 Classes	6 Classes	7 Classes
Akaike Information Criterion	8318	8233	8210
Bayesian Information Criterion	8689	8679	8731
Lo-Mendell Rubin Likelihood Ratio	181	143	87
Entropy	0.9	0.9	0.9

Results

- Fit indices supported 6 class solution
- More comprehensive sex education was linked with increased recency of kissing, solo masturbation, receptive oral sex, and sexting.
- No difference in condom use, performative oral sex, recency of vaginal sex, number of partners, or relationship satisfaction; Not enough respondents affirmed anal sex to further evaluate

Key Take Away Points:

- There are six distinct forms of sexuality education being taught in the US. This is much more diverse than typology currently shaping policy surrounding sex education
- There are some links between type of sex education and sexual health outcomes, but results are not generalizable