THE OHIO STATE UNIVERSITY

The need for occupational therapy in promoting sexual health for individuals with intellectual and developmental disabilities: An STI prevalence study

Elizabeth K. Schmidt*, MOT, OTR/L, Brittany N. Hand*, PhD, OTR/L,
Kit N. Simpson, DrPh, Amy R. Darragh, PhD, OTR/L, FAOTA

*These authors contributed equally to this work

Research Article

For reprint orders, please contact: reprints@futuremedicine.com

Journal of **Comparative Effectiveness Research**

Sexually transmitted infections in privately insured adults with intellectual and developmental disabilities

Elizabeth K Schmidt*,‡,[1], Brittany N Hand‡,[1], Kit N Simpson[2] & Amy R Darragh[1]

[1]Department of Health & Rehabilitation Sciences & The Department of Occupational Therapy, The Ohio State University, OH 432102, USA

[2]Healthcare Leadership & Management, Medical University of South Carolina, SC 29403, USA

*Author for correspondence: Schmidt.1072@osu.edu

‡Authors contributed equally

Aim: Individuals with intellectual and developmental disabilities (I/DD) may have an increased risk of sexually transmitted infections (STIs) due to limited sexual health education and higher rates of sexual abuse, yet little is known about the prevalence of STIs and STI testing in this population. **Methods:** This study compared national samples of privately insured individuals with (n = 25,193) and without I/DD (n = 25,193) on the prevalence of STIs and STI testing. **Results:** In multivariable models, individuals with I/DD were significantly less likely to have an STI diagnosis and no difference was found between groups on the odds of STI testing overall. **Conclusion:** Findings may, in part, be explained by fewer sexual experiences, increased supervision in social settings and delayed onset of sexual activity among those with I/DD.

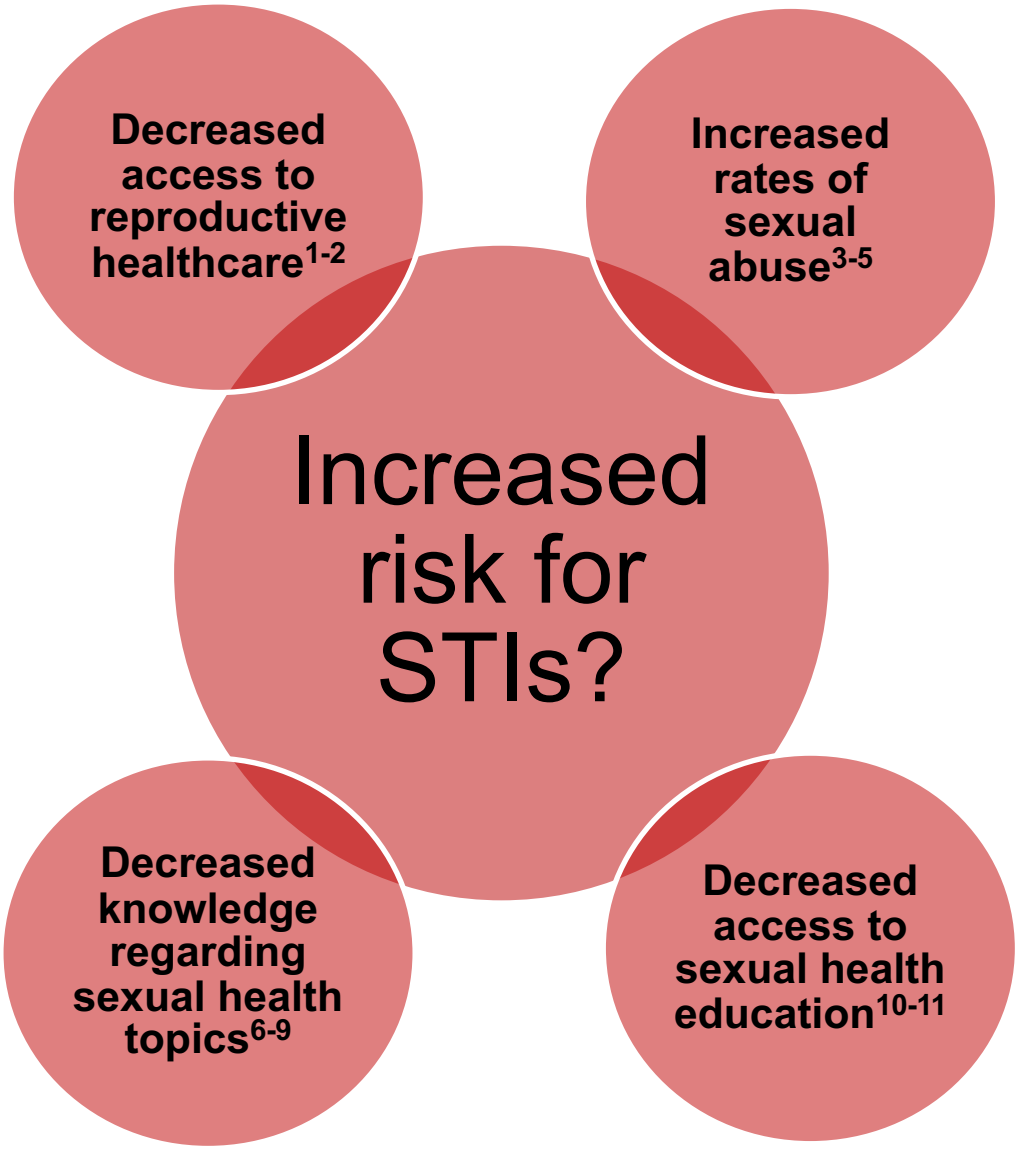
First draft submitted: 14 January 2019; Accepted for publication: 25 February 2019; Published online: 6 March 2019

Keywords: developmental disabilities • developmental disorder • intellectual disabilities • reproductive health • sexual health • sexually transmitted disease • sexually transmitted infection • STD testing and screening

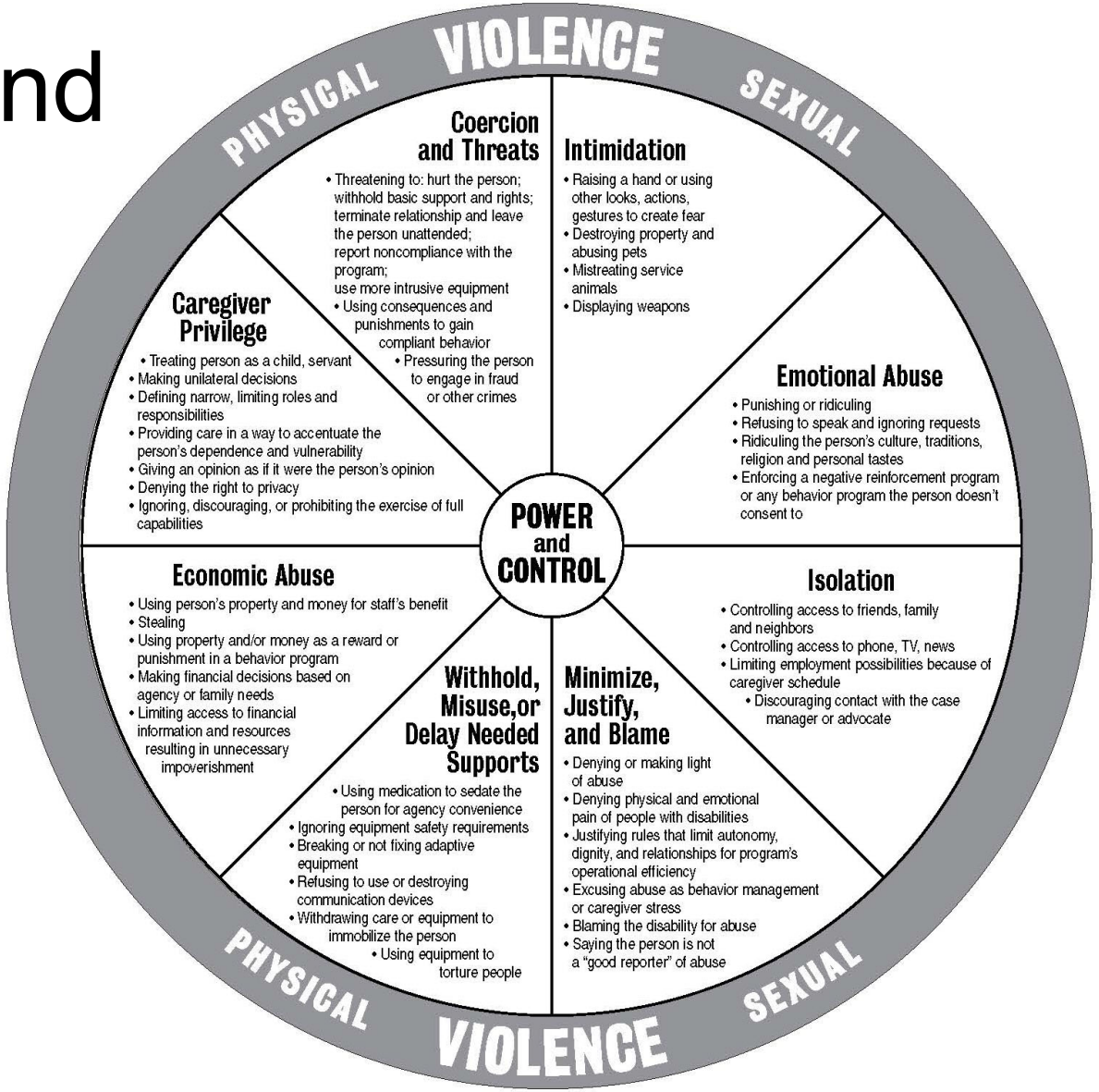
Learning Objectives

1. Compare rates of sexually transmitted infections (STI) and STI testing in individuals with and without intellectual and developmental disabilities (I/DD)
2. Identify gaps and future directions for research regarding the sexual health of individuals with I/DD

Background

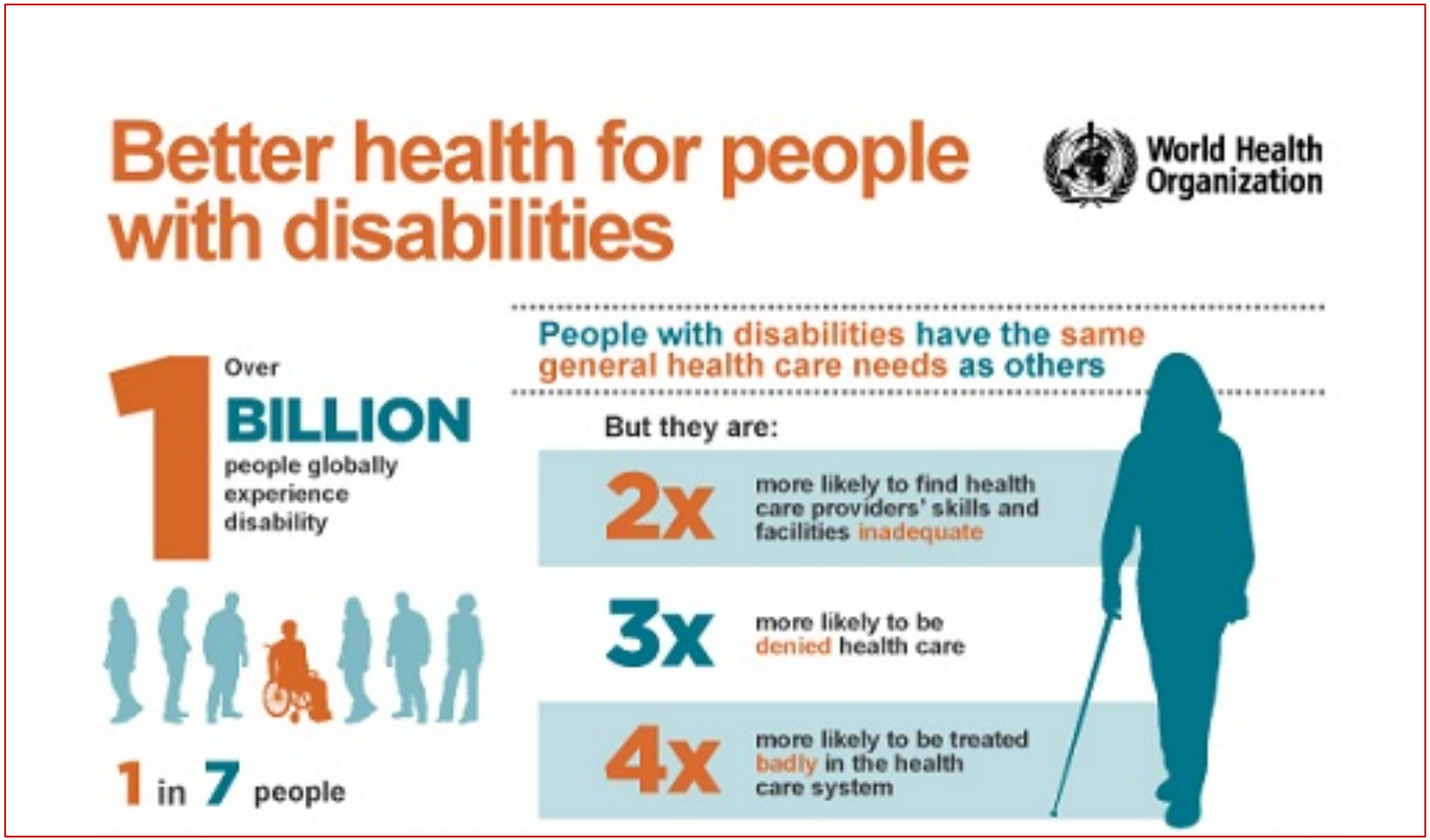

Decreased access to reproductive healthcare[1-2]
Increased rates of sexual abuse[3-5]
Increased risk for STIs?
Decreased knowledge regarding sexual health topics[6-9]
Decreased access to sexual health education[10-11]

Background



https://sapac.umich.edu/files/sapac/field/image/PC_Wheel_Disabilities_Page_1.jpg

Background



https://www.who.int/disabilities/infographic_en_510px.jpg

Methods

- Design: Cross-sectional analysis
- Data source: Thompson Reuters MarketScan ® Commercial Claims Encounters databases
  - Coverage years 2014-2015
  - National sample
  - Privately insured individuals

Methods

- Sample

	I/DD Cohort (n=25,193)	Control Cohort (n=25,193)	Total (n=50,386)
Sex			
Male	15,420 (61.2%)	15,420 (61.2%)	30,840 (61.2%)
Female	9,773 (38.8%)	9,773 (38.8%)	19,546 (38.8%)
Age Category (Years)			
15-19	9,807 (38.9%)	9,807 (38.9%)	19,614 (38.9%)
20-24	5,462 (21.7%)	5,462 (21.7%)	10,924 (21.7%)
25-29	2,363 (9.4%)	2,363 (9.4%)	4,726 (9.4%)
30-34	1,906 (7.6%)	1,906 (7.6%)	3,812 (7.6%)
35-39	1,367 (5.4%)	1,367 (5.4%)	2,734 (5.4%)
40-44	1,147 (4.6%)	1,147 (4.6%)	2,294 (4.6%)
45-54	1,916 (7.6%)	1,916 (7.6%)	3,832 (7.6%)
55-64	1,225 (4.9%)	1,225 (4.9%)	2,450 (4.9%)
I/DD Category[a]			
ASD	11,257 (44.7%)	…	11,257 (22.3%)
Cerebral Palsy	5,057 (20.1%)	…	5,057 (10%)
Down Syndrome	3,959 (15.7%)	…	3,959 (7.9%)
Spina Bifida	2,053 (8.1%)	…	2,053 (4.1%)
Unspecified ID	1,413 (5.6%)	…	1,413 (2.8%)
Other ID	852 (3.4%)	…	852 (1.7%)
Mild ID	727 (2.9%)	…	727 (1.4%)
Fragile X Syndrome	354 (1.4%)	…	354 (0.7%)
Prader Willi Syndrome	130 (0.5%)	…	130 (0.3%)
Fetal Alcohol Syndrome	74 (0.3%)	…	74 (0.1%)
Rett Syndrome	0 (0.0%)	…	0 (0.0%)
US Region of Residence			
North Central	9,125 (36.2%)	9,125 (36.2%)	18,250 (36.2%)
South	6,678 (26.5%)	6,678 (26.5%)	13,356 (26.5%)
Northeast	5,425 (21.5%)	5,425 (21.5%)	10,850 (21.5%)
West	3,904 (15.5%)	3,904 (15.5%)	7,808 (15.5%)
Unknown	61 (0.2%)	61 (0.2%)	122 (0.2%)
Mental Health Comorbidity	7,513 (29.8%)	9,103 (36.1%)	16,616 (33%)
ADHD Comorbidity	2,536 (10.1%)	5,053 (20.1%)	7,589 (15.1%)

Methods

- Outcomes:
  - STI
  - STI screening/testing
- Comorbidities:
  - ADHD
  - Mental health conditions
- Analyses:
  - Prevalence
  - Multivariable logistic regression

Results

	I/DD (n=25,193)	Control (n=25,193)	p
STI Diagnosis, n (%)			
Genital Warts/HPV	565 (2.2%)	1,051 (4.2%)	<0.001*
Herpes	37 (0.2%)	156 (0.6%)	<0.001*
HIV/AIDS	21 (0.1%)	92 (0.4%)	<0.001*
Chlamydia	14 (0.1%)	58 (0.2%)	<0.001*
Gonorrhea	10 (<0.1%)	49 (0.2%)	<0.001*
Trichomoniasis	16 (0.1%)	25 (0.1%)	0.16
Syphilis	0 (0.0%)	2 (<0.1%)	0.16
Pubic Lice	0 (0.0%)	0 (0.0%)	--
Total Cases[a]	663 (2.6%)	1,433 (5.7%)	<0.001*
STI Test, n (%)			
Asymptomatic STI Screen	171 (0.7%)	161 (0.6%)	0.58
Syphilis	55 (0.2%)	71 (0.3%)	0.15
Gonorrhea	37 (0.2%)	46 (0.2%)	0.32
HIV/AIDS	16 (0.1%)	36 (0.1%)	0.01
Chlamydia	11 (<0.1%)	11 (<0.1%)	1.00
Trichomoniasis	0 (0.0%)	0 (0.0%)	--
Herpes	0 (0.0%)	0 (0.0%)	--
Total Cases[a]	290 (1.2%)	325 (1.3%)	0.86

Results

Variable	Occurrence of any STI		Occurrence of any STI test	
	OR	95% CI	OR	95% CI
I/DD Diagnosis				
No (ref)				
Yes	0.44*	0.40-0.49*	1.11	0.88-1.39
Sex				
Male (ref)				
Female	…	…	1.53*	1.29-1.82*
Age Category (years)				
15-19 (ref)				
20-24	0.96	0.85-1.08	1.39*	1.10-1.76*
25-29	0.93	0.80-1.10	1.84*	1.39-2.43*
30-34	0.91	0.76-1.08	1.65*	1.21-2.25*
35-39	0.70*	0.56-0.88*	1.00	0.64-1.56
40-44	1.14	0.93-1.40	1.13	0.72-1.77
45-54	0.77*	0.64-0.94*	0.89	0.60-1.31
55-64	0.82	0.65-1.03	0.94	0.59-1.49
Geographic Region				
West (ref)				
Northeast	1.38*	1.19-1.60*	1.07	0.75-1.54
North Central	1.06	0.90-1.24	1.80*	1.28-2.52*
South	1.27*	1.10-1.46*	2.81*	2.07-3.84*
Unknown	1.41	0.61-3.25	N/A[a]	N/A
Comorbid ADHD	1.18*	1.04-1.34*	…	…
MH Comorbidity	1.14*	1.04-1.25*	2.43*	2.05-2.89*
I/DD(+) vs. I/DD(-) (ref) Across Age Categories				
15-19	…	…	0.99	0.72-1.35
20-24	…	…	0.59*	0.42-0.83*
25-29	…	…	0.78	0.49-1.22
20-34	…	…	1.19	0.71-2.20
35-39	…	…	2.66*	1.17-6.04*
40-44	…	…	2.20	0.95-5.01
45-54	…	…	0.86	0.43-1.73
55-64	…	…	0.82	0.35-1.94

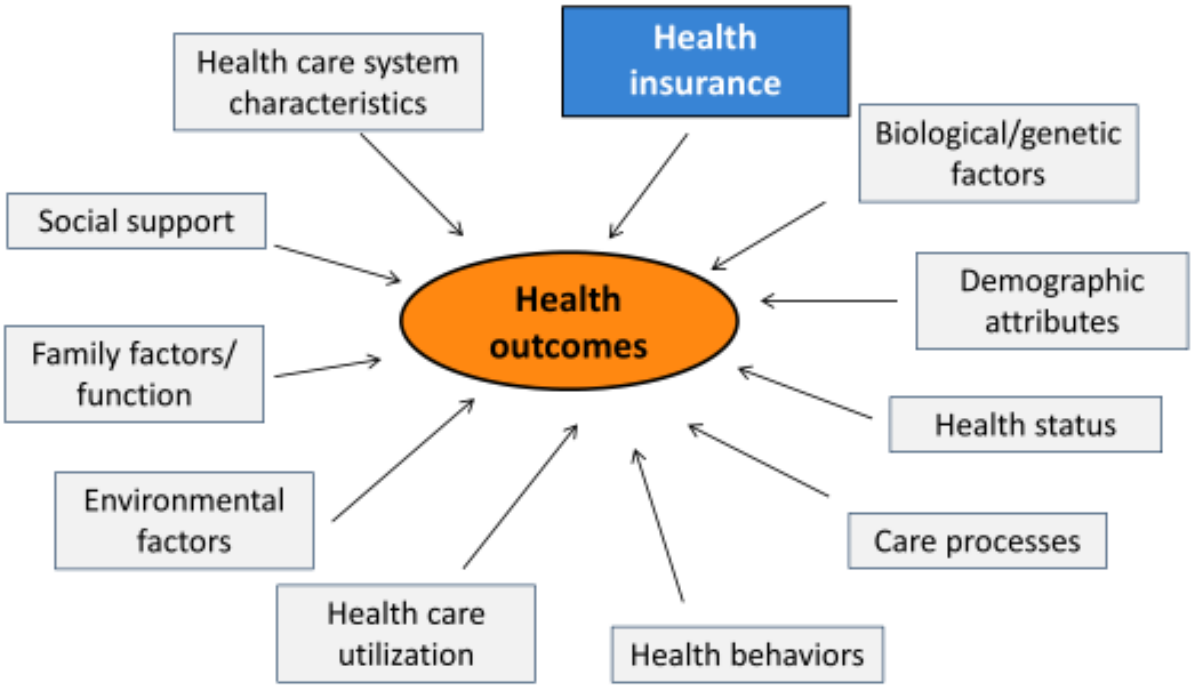
Limitations

- The findings of this study are associational and do not allow for causal inference.
- Limited availability of covariates
- Differences in types of I/DD diagnosis??
- Did not include individuals who are uninsured or who have Medicaid or Medicare

Limitations

Figure 1

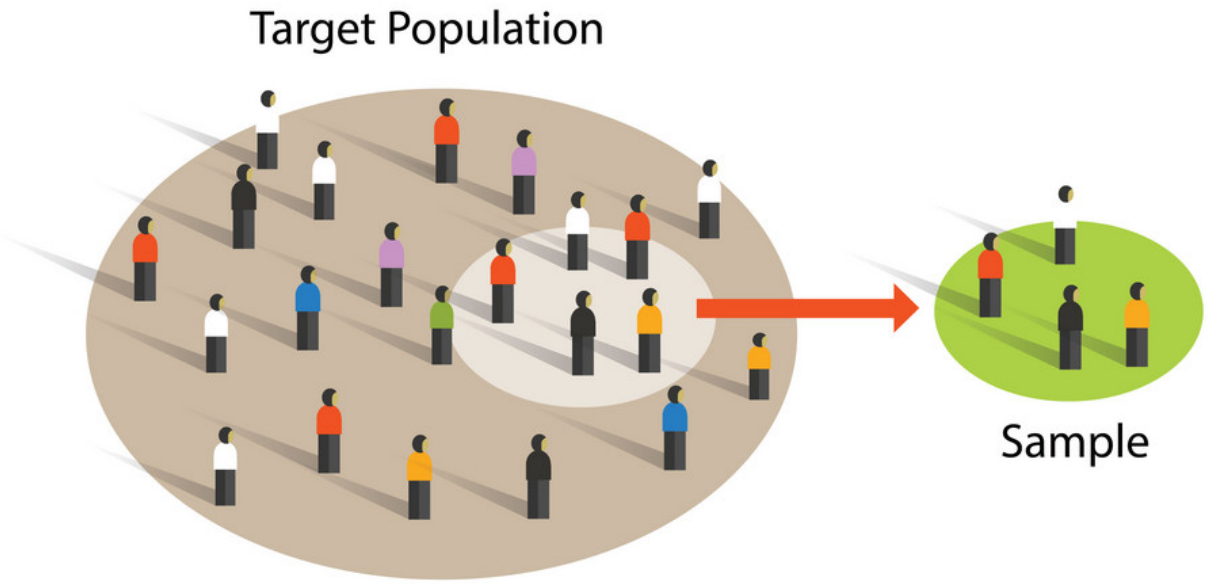
Health insurance is one of many factors that contribute to health outcomes.



https://kaiserfamilyfoundation.files.wordpress.com/2013/08/8467-figure-1.png?w=600&h=450&crop=1

Strengths

- Large, national sample
- Group frequency matching



https://cdn.vectorstock.com/i/1000x1000/27/07/sample-from-population-statistics-research-survey-vector-16452707.jpg

Conclusions

- Individuals without I/DD had 2.2 times greater odds of having an STI
- Individuals with I/DD 20-24 years had significantly lower odds and 35-39 years had significantly higher odds of STI testing

Conclusions

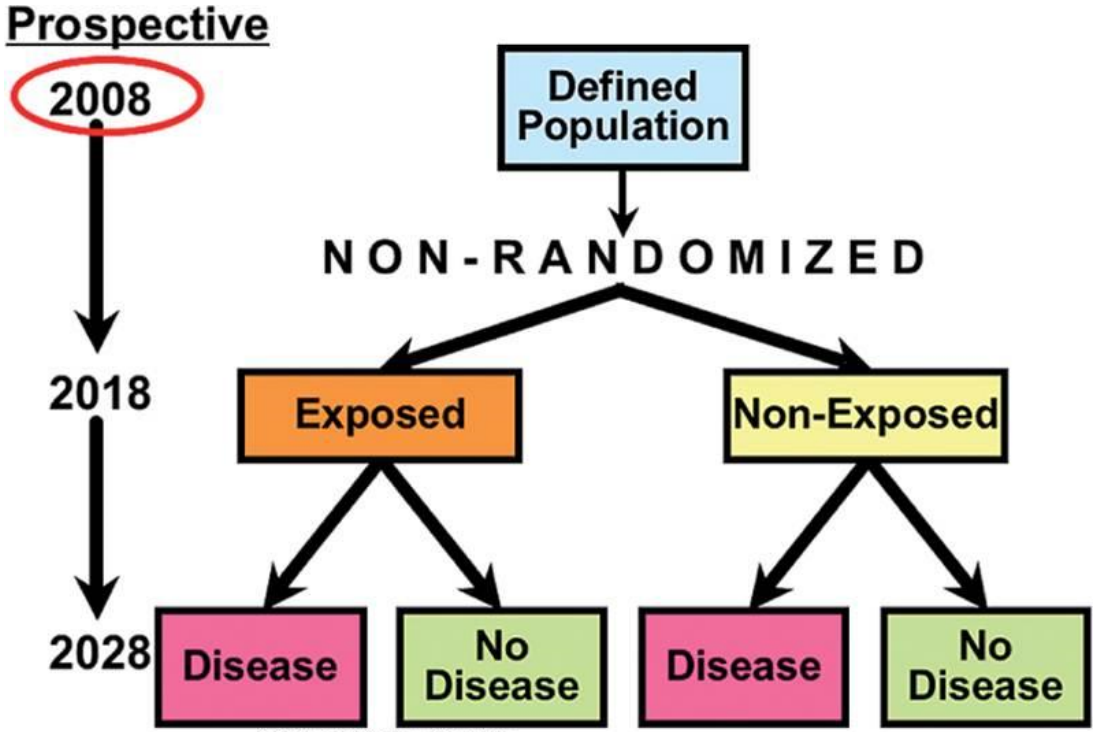
- Increased supervision in social settings
- Less likely to experience sexual intercourse (vaginal, oral, anal)
- Cervical ectopy less common
- Decreased risk of STIs

More likely to be tested for STIs at an older age

https://fthmb.tqn.com/TAPtAfHRKHtNC1uH7jgnrd5L4rY=/3865x2576/filters:fill(auto,1)/young-teens-on-chaperoned-date-in-movie-theater-526086943-5a8b4f1e3418c60037385879.jpg

Future Directions

- Prospective cohort studies
- Cross-sectional studies



OT's Role

- Sexual activity is an ADL that should be addressed by OTs!
- OT practitioners are uniquely poised to promote sexual and reproductive health with individuals with I/DD across the lifespan through:
  - ADLs
  - Formal education settings
  - Facilitation of social participation

References

1. Greenwood, N., W., & Wilkinson, J. (2013). Sexual and reproductive health care for women with intellectual disabilities: A primary care perspective. International Journal of Family Medicine, (2013), 1-8.
2. Havercamp SM, Scott HM. National health surveillance of adults with disabilities, adults with intellectual and developmental disabilities, and adults with no disabilities. Disability and Health Journal 2015;8:165–72. doi:10.1016/j.dhjo.2014.11.002.
3. Sullivan P, Knutson J. Maltreatment and disabilities: a population-based epidemiological study. Child Abuse & Neglect. 2000;24(10):1257-1273. doi:10.1016/s0145-2134(00)00190-3
4. Spencer N. Disabling conditions and registration for child abuse and neglect: a population-based study. PEDIATRICS. 2005;116(3):609-613. doi:10.1542/peds.2004-1882.
5. Jones L, Bellis M, Wood S, Hughes K, McCoy E, Eckley L, Bates G, Mikton C, Shakespeare T, Officer A. Prevalence and risk of violence against children with disabilities: a systematic review and meta-analysis of observational studies. The Lancet. 2012;380(9845):899-907. doi:10.1016/s0140-6736(12)60692-8.
6. McDaniels B, Fleming A. Sexuality education and intellectual disability: time to address the challenge. Sexuality and Disability. 2016;34(2):215-225. doi:10.1007/s11195-016-9427-y.
7. McGillivray J. Level of knowledge and risk of contracting HIV/AIDS amongst young adults with mild/moderate intellectual disability. Journal of Applied Research in Intellectual Disabilities. 1999;12(2):113-126. doi:10.1111/j.1468-3148.1999.tb00070.x.
8. Conod, L., Servais, L., 2007. Sexual life in subjects with intellectual disability. Sexuality and intellectual disability, 50(2), 230-238.
9. McCabe, M., Schreck, A., (1992). Before sex education: an evaluation of the sexual knowledge, experience, feelings and needs of people with mild intellectual disabilities. Journal of Intellectual and Developmental Disability, 18(2), 75-82.
10. Evans, D., S., McGuire, B., E., Healy, E., Carley, S., N. (2009). Sexuality and personal relationships for people with an intellectual disability. Part II: staff and family carer perspectives. *Journal of Intellectual Disability Research, 53(11),* 913-921.
11. Bernert DJ, Ogletree RJ. Women with intellectual disabilities talk about their perceptions of sex. Journal of Intellectual Disability Research 2013;57:240–9. doi:10.1111/j.1365-2788.2011.01529.x.

THE OHIO STATE UNIVERSITY

Questions?

Contact Elizabeth K. Schmidt at
Schmidt.1072@osu.edu