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## BIOGRAPHICAL SKETCH

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NAME: Halpern, Carolyn T.

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eRA COMMONS USER NAME (credential, e.g., agency login): carolyn\_halpern

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POSITION TITLE: Professor of Maternal and Child Health

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EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
University of Houston	B.S.	05/1976	Psychology
University of Houston	M.A.	05/1979	Developmental Psychology
University of Houston	Ph.D.	05/1982	Developmental Psychology

### A. Personal Statement

Dr. Halpern is Professor and Chair of Maternal and Child Health (MCH) in the Gillings School of Global Public Health. She is a developmental psychologist and Deputy Director/co-investigator of the Waves IV and V National Longitudinal Study of Adolescent to Adult Health (Add Health) program project, leading survey instrument development in both waves, among other responsibilities. Before her work on the Add Health project, Halpern directed two U.S.-based longitudinal studies examining pubertal changes and their implications for adolescent sexual development, as well as a global data collection project assessing the potential of the Web for improving adolescents' knowledge about sexual and reproductive health. Halpern's research interests center on improving understanding of healthy sexual development and the implications of adolescent experiences for developmental and demographic processes into adulthood, particularly as these relate to sexual and romantic relationships. Halpern has nearly 30 years of research experience in the study of adolescent and young adult sexuality and risk-taking in both U.S. and global settings, and more than 100 peer-reviewed publications on these topics. She recently concluded a very productive five-year NICHD-based project using Add Health data to examine sexual trajectories from adolescence into adulthood and the implications of those patterns for multiple aspects of young adult well-being. Halpern is also a co-investigator on several NIH-funded projects evaluating interventions to reduce HIV risk in adolescents in sub-Saharan Africa. Halpern teaches courses in human sexuality, adolescent health, theory, and grant development; she has a strong track record of effective mentoring, and of facilitating successful student and postdoctoral fellow transitions to research positions in academic and other institutional settings.

1. Harris KM, Halpern CT, Hussey J, Whitsel E, Killeya-Jones L, Tabor J, Elder GH, Hewitt J, Shanahan M, Williams RB, Siegler IC, Smolen A. Social, behavioral, and genetic linkages from adolescence into adulthood. *American Journal of Public Health* 2013;103(S1):S25-S32. PMID: PMC3786750.
2. Schalet A, Santelli J, Russell ST, Halpern CT, Miller SA, Pickering SS, Hoening JM, Goldberg SK. Broadening the evidence for adolescent sexual and reproductive health and education. *Journal of Youth and Adolescence* 2014;43:1595-1610. PMID: PMC4162986.
3. Landor AM, Halpern CT. The enduring significance of skin tone: Linking skin tone to union formation attitudes and sexual behavior. *Journal of Youth and Adolescence*. 2016;45(5):986-1002.
4. Landor AM, Halpern CT. Prevalence of high-risk sexual behaviors among monoracial and multiracial groups from a national sample: Are multiracial young adults at greater risk? *Archives of Sexual Behavior*. 2016; 45(2):467-475 DOI 10.1007/s10508-015-0647-5.

### B. Positions and Honors

#### Positions and Employment

1982	Supervisor of Psychological Testing/Test Administrator, Kelsey-Seybold Clinic, P.A., Houston, TX. Project: United States Air Force Health Survey (Agent Orange Study), Wave I
1983-85	Statistician/Research Associate, Governor's Office, N.C. Office of State Budget and Management, Research and Planning Services, Raleigh, NC
1986-98	Project Director/Research Associate, Carolina Population Center, University of North Carolina at Chapel Hill (UNC-CH)

1998-04 Assistant Professor, Tenure-track, Department of Maternal and Child Health, Gillings School of Global Public Health, UNC-CH  
 1998- Faculty Fellow, Carolina Population Center, UNC-CH  
 2000- Faculty Fellow, Center for Developmental Science, UNC-CH  
 2004-11 Associate Professor, Tenured, Department of Maternal and Child Health, Gillings School of Global Public Health, UNC-CH  
 2011- Professor, Tenured, Department of Maternal and Child Health, Gillings School of Global Public Health, UNC-CH  
 2014-2015 Interim Chair, Department of Maternal and Child Health, Gillings School of Global Public Health  
 2015- Chair, Department of Maternal and Child Health, Gillings School of Global Public Health

**Other Experience and Professional Memberships**

2007- Delta Omega, Honorary Public Health Society

**Honors**

2000- Nominee for McGavran Excellence in Teaching Award  
 2001, 2014 Nominee for the John Larsh Student Mentorship Award  
 2004- Nominee for Bernard G. Greenberg Alumni Endowment Award, UNC-CH  
 2006, 2007 Nominee for Graduate School Faculty Award for Excellence in Doctoral Mentoring, UNC-CH  
 2007, 2014 Nominee for Carolina Women’s Leadership Council Mentoring Award, UNC-CH  
 2009- Recipient Graduate School Faculty Award for Excellence in Doctoral Mentoring, UNC-CH  
 2010- Recipient National Association of Teachers of Maternal and Child Health Loretta Lacey Academic Leadership Award  
 2016 Recipient John E. Larsh Jr. Student Mentorship Award, Gillings School of Global Public Health, UNC-CH

**C. Contribution to Science**

1. My early research focused on the hormonal underpinnings of pubertal change and how the interactions of physical, psychological, and social changes contribute to adolescent sexual initiation and behavior. As part of this work, my publications examined methodological issues related to technology changes in hormone assays and issues of repeated questionnaire administration. Using smaller-scale longitudinal studies with intensive schedules of surveys, psychological and physical assessment, and biospecimen collection, publications from these projects demonstrated significant but modest contributions of pubertal testosterone changes to sexual behavior in both males and females, contributions that were tempered by social experience such as religious attendance. These findings constituted early support for the utility of biosocial/systems approaches to developmental and health issues, approaches that have now become the standard for much research in public health and the developmental sciences.

- a. Halpern CT, Udry JR. Variation in adolescent hormone measures and implications for behavioral research. *Journal of Research on Adolescence* 1992;2(2):103-122.
- b. Halpern CT, Udry JR, Campbell B, Suchindran C, Mason GA. Testosterone and religiosity as predictors of sexual attitudes and activity among adolescent males: A biosocial model. *Journal of Biosocial Science* 1994;26:217-234.
- c. Halpern CT, Udry JR, Suchindran C. Effects of repeated questionnaire administration in longitudinal studies of adolescent males' sexual behavior. *Archives of Sexual Behavior* 1994;23(1):41-57.
- d. Halpern CT, Udry JR, Campbell B, Suchindran C. Effects of body fat on weight concerns, dating, and sexual activity: A longitudinal analysis of black and white adolescent females. *Developmental Psychology* 1999;35:721-736.

2. Building on this early work, I used a variety of data sets and expanded the range of biomarkers to further our understanding of biopsychosocial models of sexual development and romantic relationships. The expansions included the addition of genetic factors to explanatory models, exploration of the intersections between sexual behavior and intimate violence, and examination of potential bidirectional relationships between risk-taking and depressive symptoms. Much of this work is based on data from Add Health. The contributions of these publications include first national estimates of intimate partner violence in heterosexual and same-sex adolescent couples, demonstrated linkages between sexual activity and violence within adolescent romantic partnerships, and evidence to support a pathway from risk taking to depressive symptoms rather than support for risk taking as “self-medication” for depression.

- a. Halpern CT, Oslak SG, Young ML, Martin SL, Kupper L. Partner violence among adolescents in opposite-sex romantic relationships: Findings from the National Longitudinal Study of Adolescent Health. *American Journal of Public Health* 2001;91:1679-1685. PMID:1446854
- b. Kaestle CE, Halpern CT. Sexual intercourse precedes partner violence in adolescent romantic relationships. *Journal of Adolescent Health* 2005;36:386-392.
- c. Hallfors DD, Waller MW, Bauer D, Ford CA, Halpern CT. Which comes first in adolescence: Sex and drugs or depression? *American Journal of Preventive Medicine* 2005;29:163-170.
- d. Halpern CT, Kaestle CE, Guo G, Hallfors DD. Gene-environment contributions to young adult sexual partnering. *Archives of Sexual Behavior* 2007;36:543-554.

3. In my NICHD funded project examining sexual trajectories we explored more comprehensive sexual initiation patterns among youth, and what the implications of those patterns are for later sexual behavior and sexual health. We found there is a typology of initiation patterns that can be characterized by differences in aspects such as timing of initiation, sequence of behavioral initiation (e.g., vaginal or oral sex first), and pace of behavioral exploration. These person-centered analyses suggest common patterns across biological sex and race/ethnicity, although pattern prevalence does vary by these demographics. We find that these patterns make a difference for some types of outcomes. For example, we documented protective effects of initiating oral-genital sex first, and waiting at least a year before initiating vaginal sex, among adolescents. This pattern is associated with significantly lower odds of teen pregnancy. We have also examined young adults who, unlike the vast majority of individuals, have no sexual experience – coital or noncoital – by young adulthood. We find this is a diverse group whose status may be attributable to various circumstances, such as lack of opportunity, as well as explicit choice.

- a. Halpern CT, Haydon A. Sexual timetables for oral-genital, vaginal, and anal sex: Sociodemographic comparisons in a nationally representative sample. *American Journal of Public Health* 2012; 102(6):1221-8. PMID:PMC3394539
- b. Reese B, Haydon AA, Herring AH, Halpern CT. The association between sequences of sexual initiation and the likelihood of teen pregnancy. *Journal of Adolescent Health* 2013;52(2):228-233. PMID: PMC3551538
- c. Haydon A, Herring A, Halpern CT. The association between patterns of emerging sexual behavior and reproductive health in young adulthood. *Perspectives on Sexual and Reproductive Health*. 2012;44(4):218–227. PMID: PMC3531866
- d. Haydon AA, Cheng MM, Herring AH, McRee AL, Halpern CT. Prevalence and predictors of sexual inexperience in adulthood. *Archives of Sexual Behavior* 2014;43(2):221-230. PMID: PMC3947171

4. My research team has capitalized on the sexual minority sample in Add Health, demonstrating that health disparities among sexual minorities during adolescence persist into adulthood, are numerous, and are particularly pronounced among women. I recently directed a doctoral dissertation that examined sexual initiation patterns, and their later health implications, among the sexual minorities in the Add Health sample.

- a. Halpern CT, Young ML, Waller M, Martin SL, Kupper L. Prevalence of partner violence in same-sex romantic and sexual relationships in a national sample of adolescents. *Journal of Adolescent Health* 2004;35:124-131.
- b. Goldberg S, Strutz KL, Herring AA, Halpern CT. Risk of substance abuse and dependence among young adult sexual minorities, utilizing a multidimensional measure of sexual orientation. *Public Health Reports* 2013;128(3):144-52. PMID: PMC3610066.
- c. Strutz KL, Herring AH, Halpern CT. Health disparities among young adult sexual minorities in the U.S. *American Journal of Preventive Medicine* 2015;48(1):76-88. PMID: PMC4274226.

5. I have also made contributions related to adolescent health on the global stage. My co-PI and I conducted an early study in Kenya and Brazil examining the potential benefits of web-based education in reproductive health in low resource settings. We found that, while technology is attractive to youth, they will not necessarily use it as a source of health information; context must be considered in designing interventions, regardless of apparently attractive programmatic elements. I have also collaborated on studies evaluating the effectiveness of structural interventions (e.g., school support, cash transfer programs) in improving adolescent sexual health and general well-being.

- a. Halpern CT, Mitchell EMH, Farhat T, Bardsley P. Effectiveness of web-based education on Kenyan and Brazilian adolescents' knowledge about HIV/AIDS, abortion law, and emergency contraception:

Findings from TeenWeb. *Social Science and Medicine* 2008;67:628-637.  
<http://dx.doi.org/10.1016/j.socscimed.2008.05.001>.

- b. Hallfors DD, Cho H, Rusakaniko S, Iritani B, Mapfumo J, Halpern CT. Supporting orphan girls to stay in school as HIV prevention: Evidence from a randomized control trial in rural Zimbabwe. *American Journal of Public Health* 2011;101(6):1082-1088. PMID: PMC3093274 (An AJPH paper of the year)
- c. Handa S, Halpern CT, Pettifor A, Thirumurthy H. The Government of Kenya's Cash Transfer Program reduces the risk of sexual debut among young people age 15-25. *PLoS ONE* 2014;9(1): e85473. PMID: PMC3893206

#### **Complete List of Published Work in MyBibliography:**

<http://www.ncbi.nlm.nih.gov/sites/myncbi/carolyn.halpern.1/bibliography/40371909/public/?sort=date&direction=ascending>

#### **D. Research Support** **Ongoing Research Support**

P01HD031921 (Harris) 07/16/14-04/30/19

NIH/NICHD

The National Longitudinal Study of Adolescent Health: Wave V

We will collect a fifth follow-up wave of interviews with original respondents to the National Longitudinal Study of Adolescent Health. The primary purpose of the follow-up is to determine the early life precursors of chronic disease, adding to the extensive public use dataset and enhancing the study of health transitions across the life course.

Role: Co-Investigator/PI of subproject

T32HD007168 (Halpern) 07/01/79-04/30/19

NIH/NICHD

Population Research Training

This is the Carolina Population Center's training program in demography and the social and health sciences.

Role: PI since 2011

R01 (Pettifor) 04/22/16-1/31/21

NIH/NICHD

Multilevel Mechanisms of HIV Acquisition in Young South African Women

This project will examine mechanisms and effects of key social determinants measured at multiple levels (e.g., individual, household, and community) that influence HIV acquisition in young women in South Africa using an ongoing cohort of 2,500 adolescent South African girls, followed through key life transitions into early adulthood.

Role: Co-Investigator

R49CE002479 (Marshall) 08/01/14-07/31/19

CDC/NCIPC

Innovative Behavior Modification Strategies to Reduce Mild Traumatic Brain Injury Risk in High School Football Athletes

Our mission of building the field of injury and violence prevention and control is implemented in our vision of collaborative evidence-based action in local, state, national, and global communities. Four research projects address transportation, prescription drug overdose, traumatic brain injuries, and older adult falls. In addition to these research projects, the training and technical support initiatives proposed in this application are designed to facilitate workforce development and policy change in our state, region, and nationally.

Role: Co-Investigator

#### **Completed Research Support**

R01HD073342 (Harris) 07/24/12-03/31/17

NIH/NICHD

Add Health: A Genotype and Phenotype Resource for the Global Scientific Community

This project will complete genome-wide genotyping on the remaining 6,000 Add Health samples using current Illumina chip technology, prepare genotype and phenotype data and documentation for dissemination, and conduct GWAS. Accomplishing these aims will make available to the global scientific community a unique resource of rich, longitudinal environmental data coupled with comprehensive phenotype and genotype data on more than 12,000 nationally representative and ethnically diverse young adults.

Role: Co-Investigator

R01HD057046 (Halpern)

03/01/10-02/29/16

NIH/NICHD

Sexual Behavior Trajectories from Adolescence to Adulthood

Using data from Waves I - IV of the National Longitudinal Study of Adolescent Health (Add Health) this project:

1) identified trajectories of sexual and romantic partnering from early adolescence into adulthood, and examined pathway differences by gender, race/ethnicity, sexual orientation, and disability; 2) tested hypotheses derived from Life Course and other developmental theory about ways in which the interactions of biological characteristics, psychological factors, and life experiences sustain or change sexual and romantic trajectories across the life course; and 3) determined concurrent and later health correlates of trajectories.

Role: PI

R01HD057046-01A2S1 (Halpern)

03/01/10-02/29/16

NIH/NICHD

Sexual Behavior Trajectories from Adolescence to Adulthood (Administrative Supplement for Under-represented Minorities)

This supplemental award provided support for one graduate student under the Research Supplements to Promote Diversity in Health-Related Research Program.

Role: PI

R01MH093241 (Handa)

01/01/11-12/31/14

NIH/NIMH

Social Cash Transfers, Household Risk and HIV Prevention in Kenya

This project assessed the impact of the Government of Kenya's Cash Transfer for Orphans and Vulnerable Children Program (CT-OVC) on a range of poverty, health and education outcomes, including HIV, among the target group of ultra-poor households with OVC. The project is also examining whether the program has affected time preferences for adults, and how time preferences, subjective risk assessment and risk aversion influence the propensity to engage in choice behavior with long time horizons such as savings, human capital investment and risky sexual activity

Role: Co-investigator

R01MH092215 (Cho)

07/01/11-03/31/16

NIH/NIMH via PIRE

School Support as Structural HIV Prevention for Adolescent Orphans in Western Kenya

This was a randomized controlled trial to evaluate whether school support as a structural intervention can retain adolescent orphans in school through the transition to high school, delay sexual debut, and reduce the likelihood of HIV and herpes simplex virus type 2 (HSV-2) infections. The project also included a process evaluation of the implementation of the program and comparative cost effectiveness analyses.

Role: Co-Investigator and PI of subcontract

P60DA011015 (Hewitt)

05/01/09-02/28/14

Subcontract with University of Colorado at Boulder via NIH/NIDA

Center on Antisocial Drug Dependence: The Genetics of HIV Risk Behaviors

This project supported a Comprehensive P60 Center that has the overall goal of contributing to the understanding of the etiology of individual differences in behavioral control or behavioral disinhibition, the relationship of this to drug abuse and the development of dependence, and the role that these play in the propensity for risky behaviors that may result in STDs, including HIV/AIDS.

Role: Co-Investigator and PI of subcontract