

# Bodyweight, Weight Perceptions and Health-Related Quality of Life at Age 29

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## Background

- Measures of Health Related Quality of Life (HRQoL) have become increasingly important in efforts to assess the health of individuals and populations and are a key component of Healthy People 2020.
- Some studies find a connection between obesity and HRQoL, others do not suggesting that there may be significant modifiers of this relationship.
- As average BMI in the US has increased, fewer overweight men and women perceive themselves as being overweight (Burke, Heiland & Nadler 2010).
- Adults who misperceive their weight as healthy may be doing so to avoid the stigma often associated with excess weight.
- An accurate perception of overweight status may combine with an identification of fat-stigmatizing beliefs leading to lower ratings of quality of life; whereas a more optimistic perception of weight status may have higher ratings.

## Current Study

- We examine the relationship between bodyweight and physical- and mental- HRQoL among a national sample of young adults aged 29. Weight perception is considered as a potential moderator of the relationship between bodyweight and HRQoL.

## Data and Sample

- The NLSY97 is a nationally representative, longitudinal survey of youth born in 1980-84 who were living in the US in 1997. Pregnant women are excluded. N= 6,052.

## Key Measures at Age 29

- HRQoL.** Dependent variables are the *Physical Component Summary Scale Score* and the *Mental Health Component Summary Scale Score*.
- Bodyweight.** BMI at age 29. BMI cutoffs define underweight ( $BMI \leq 18.5$ ), healthy weight ( $18.5 > BMI < 25$ ) and overweight ( $BMI \geq 25$ ).
- Perceived Weight.** We collapse perceived weight into three categories *Underweight*, *About Right* and *Overweight*.

## Results

A sizeable proportion of the sample did not accurately perceive their weight status

Table 1: Weighted Proportion of Young Adults aged 29 with (In)congruent Weight Perceptions

	WEIGHT PERCEPTIONS				
BODYWEIGHT	Underweight	About Right	Overweight	Total	Row %
A. Men (N=3,024)					
Underweight	0.575 (20)	0.315 (10)	0.110 (4)	1.000	0.011 (34)
Healthy	0.246 (235)	0.677 (622)	0.077 (67)	1.000	0.319 (924)
Overweight	0.027 (68)	0.354 (772)	0.618 (1,226)	1.000	0.669 (2,066)
Column %	0.103 (323)	0.457 (1,404)	0.440 (1,297)	1.000	
B. Women (N=2,858)					
Underweight	0.268 (35)	0.493 (32)	0.239 (6)	1.000	0.028 (73)
Healthy	0.036 (77)	0.774 (714)	0.190 (295)	1.000	0.415 (1,086)
Overweight	0.004 (47)	0.199 (236)	0.797 (1,416)	1.000	0.557 (1,699)
Column %	0.048 (159)	0.351 (982)	0.601 (1,717)	1.000	

Source: National Longitudinal Survey of Youth 1997 Cohort

## Men and women's physical and mental HRQoL depends on the intersection of bodyweight and their perception of weight

Figure 1: Predicted Physical SF-12 Score by Bodyweight and Perceived Weight among Men Aged 29

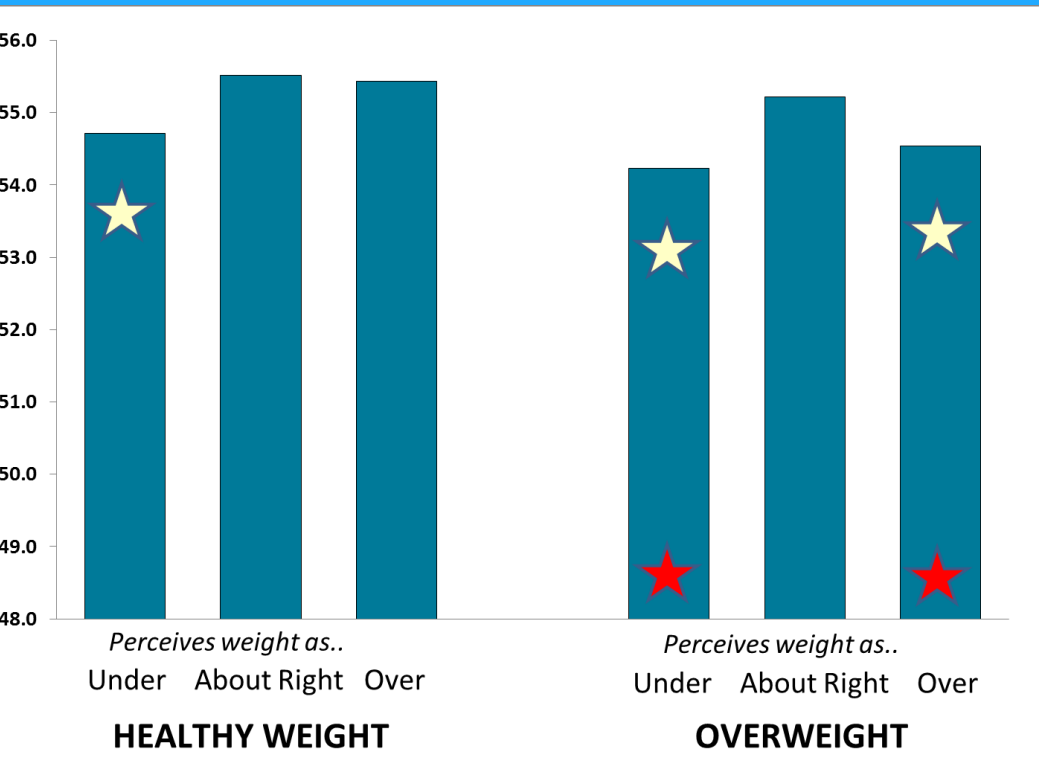
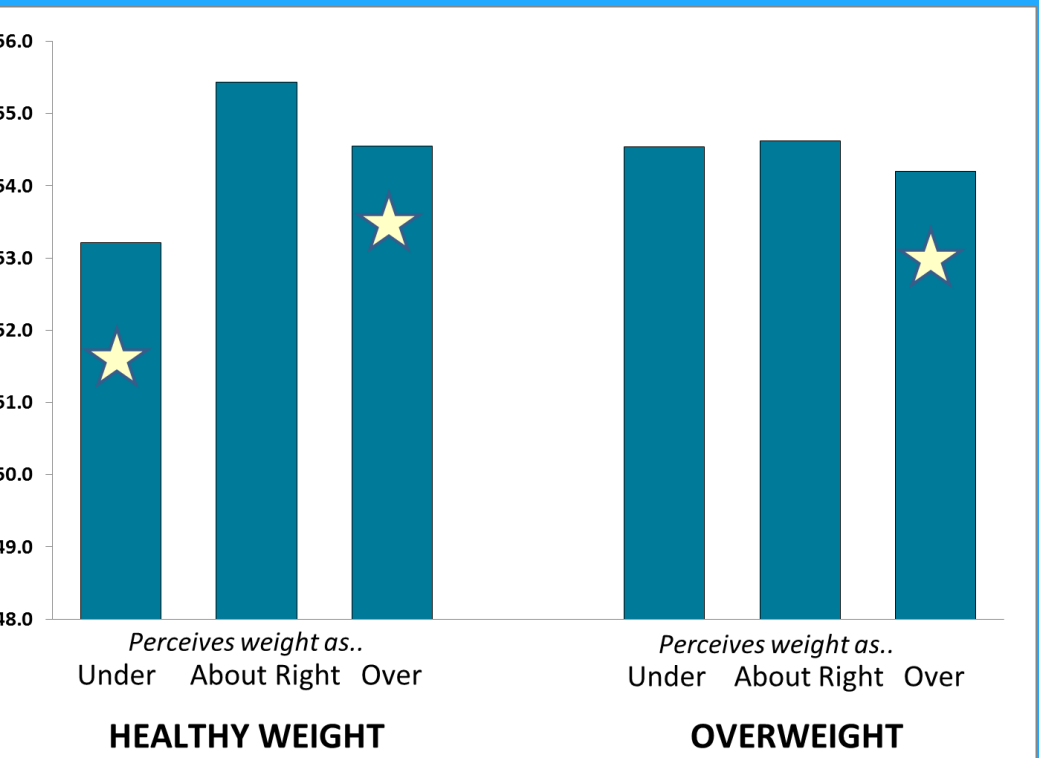


Figure 2: Predicted Physical SF-12 Score by Bodyweight and Perceived Weight among Women Aged 29



### Key for Figures



= Significantly different from those at a Healthy weight who perceive weight as "About Right"



= Significantly different from those who are Overweight but perceive weight as "About Right"

Notes: Predicted values based on multivariate linear regression models including interactions between actual and perceived weight. Respondents with reported bodyweight falling into underweight are excluded from these analyses. All analyses are weighted by custom population weights supplied by the NLSY. Models control for race/ethnicity, work limitations (kind and amount), educational attainment, and health behaviors.

Figure 3: Predicted Mental SF-12 Score by Bodyweight and Perceived Weight among Men Aged 29

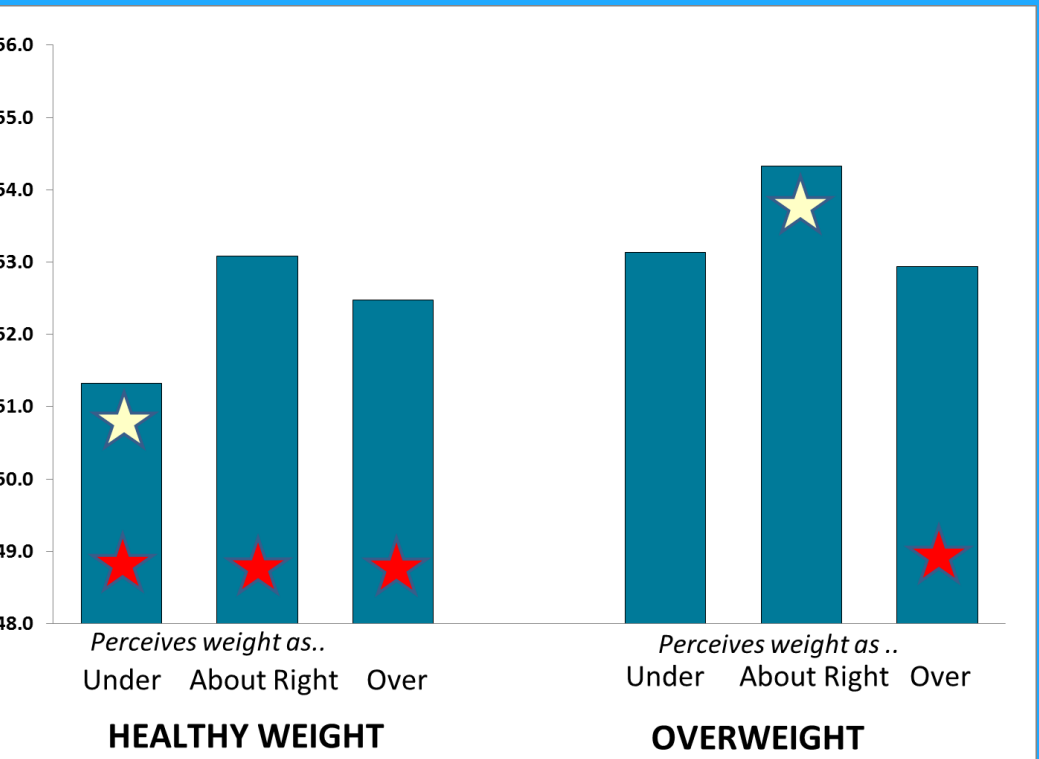
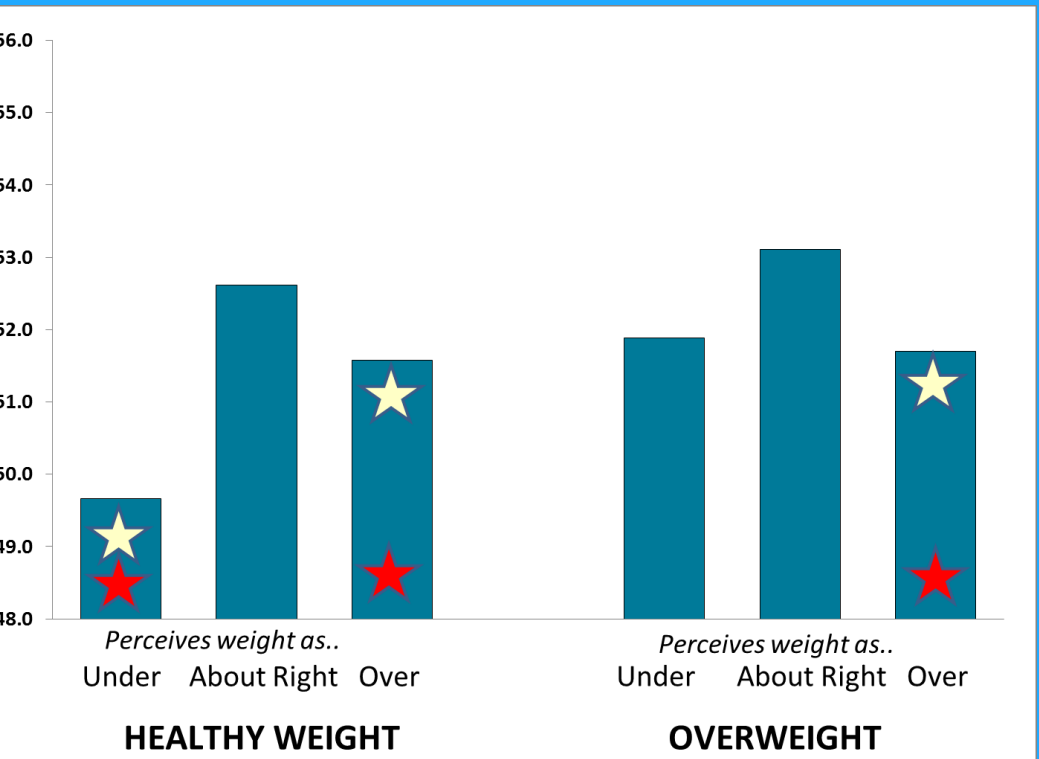


Figure 4: Predicted Mental SF-12 Score by Bodyweight and Perceived Weight among Women Aged 29



## Summary

- Men who accurately perceive their overweight status have lower ratings of mental and physical HRQoL than overweight men who perceive their weight as *About Right*.
- Healthy weight and overweight men who perceive themselves as *Underweight* report lower ratings of physical HRQoL.
- Overweight men who perceive their weight as *About Right* have higher ratings of mental HRQoL than men at a healthy weight.
- Women who accurately perceive their overweight status have lower ratings of mental HRQoL than overweight women who perceive their weight as *About Right*.
- Healthy weight women who perceive themselves as either *Under/Overweight* report lower mental HRQoL than overweight women who perceive their weight as *About Right*.

## Conclusions

- In the context of an increasingly overweight society, it is important to understand how weight perceptions may influence the degree to which young adults with excess weight may experience diminished HRQoL.
- Increasing awareness of healthy weight levels, may have an impact of weight-related behavior change.

This research was supported in part by the Center for Family and Demographic Research, Bowling Green State University, which has core funding from the Eunice Kennedy Shriver National Institute of Child Health and Human Development (R24HD050959).



# Neighborhood Norms, Disadvantage, and Intimate Partner Violence Perpetration

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## Background

- Scholars have increasingly examined the influence of macro-level factors on intimate partner violence
- Research has moved beyond examination of disadvantage itself to consider the ways in which cultural norms influence violence patterns
- Yet the influence of the neighborhood normative climate likely extends beyond norms regarding the use of violence, shaping cultural understandings about dating and the opposite sex

## Prior Research

### Contextual Influences on Behavior

- Research on IPV finds evidence of an association between neighborhood structural features and partner violence

### Community Norms and Violence

- The social environment facilitates the transmission of messages regarding conduct across multiple domains
- Subcultural theories suggest the potential for wider acceptance of IPV among disadvantaged groups

### Attitudes about Dating and the Opposite Sex

- Liberal dating norms and gender mistrust are both related to relationship quality, and may influence negative styles of interaction between partners

## Current Investigation

- To assess the extent to which individuals’ attitudes about dating and the opposite sex influence patterns of IPV perpetration over time
- To examine whether the neighborhood normative climate contributes to our understanding of IPV perpetration, net of individual attitudes and beliefs

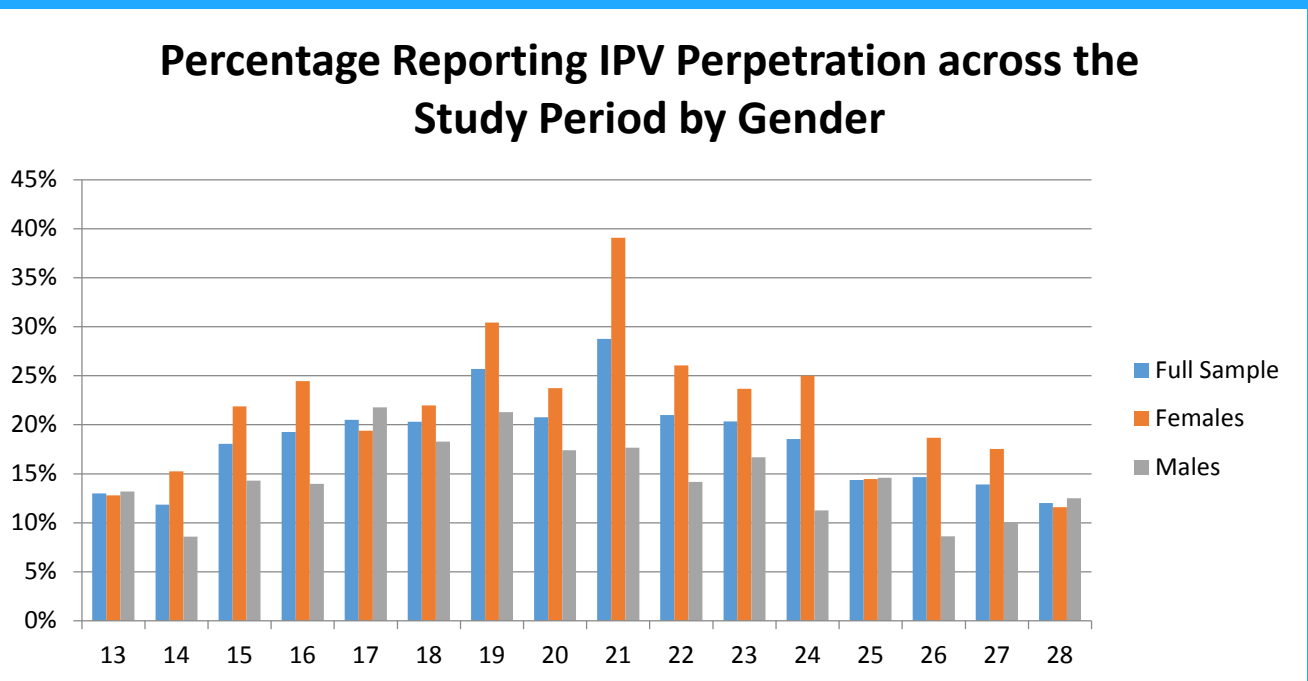
## Data and Sample

### Toledo Adolescent Relationships Study (TARS)

- Five waves of data collected (2001-2011)
- Respondents were 22-29 at the last interview

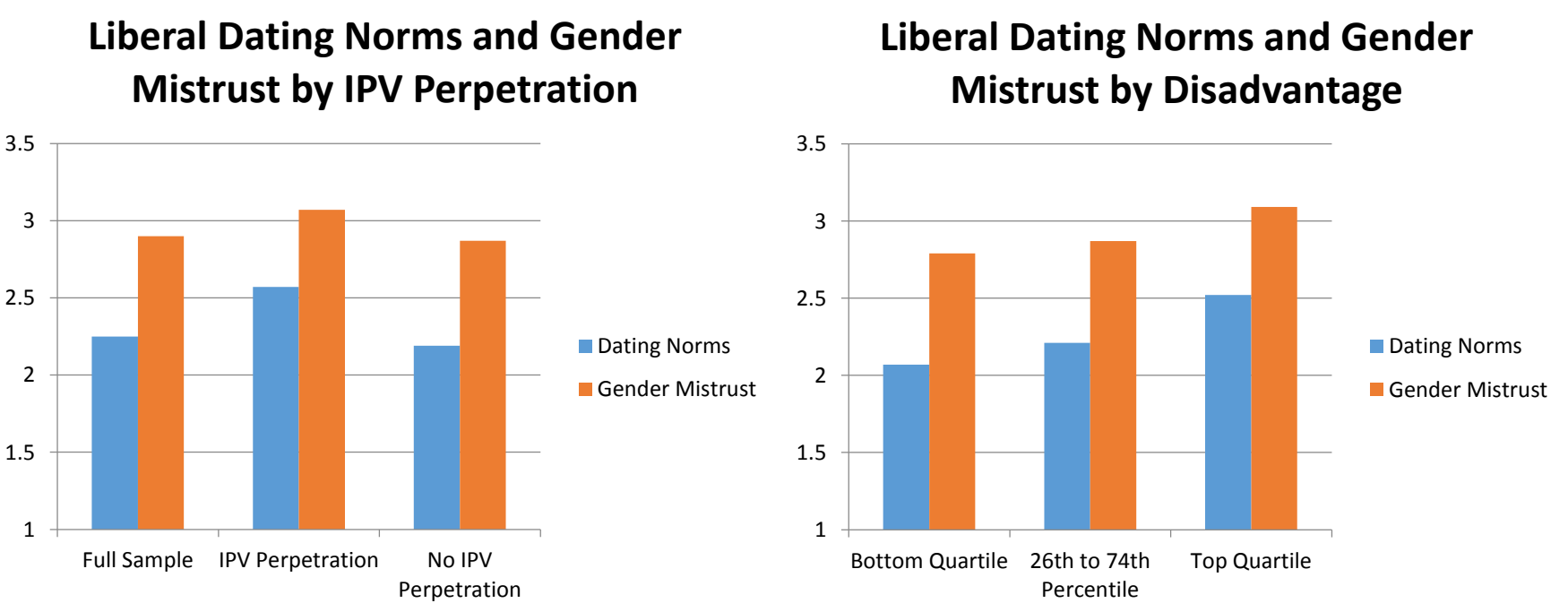
### Sample

- Analyses rely on all 5 waves of structured interviews



## Key Measures

- IPV Perpetration: 4-item version of the Conflict Tactics Scale
- Liberal Dating Norms: “It’s ok to date more than one person at a time”
- Gender Mistrust: “You can’t trust most girls/guys”



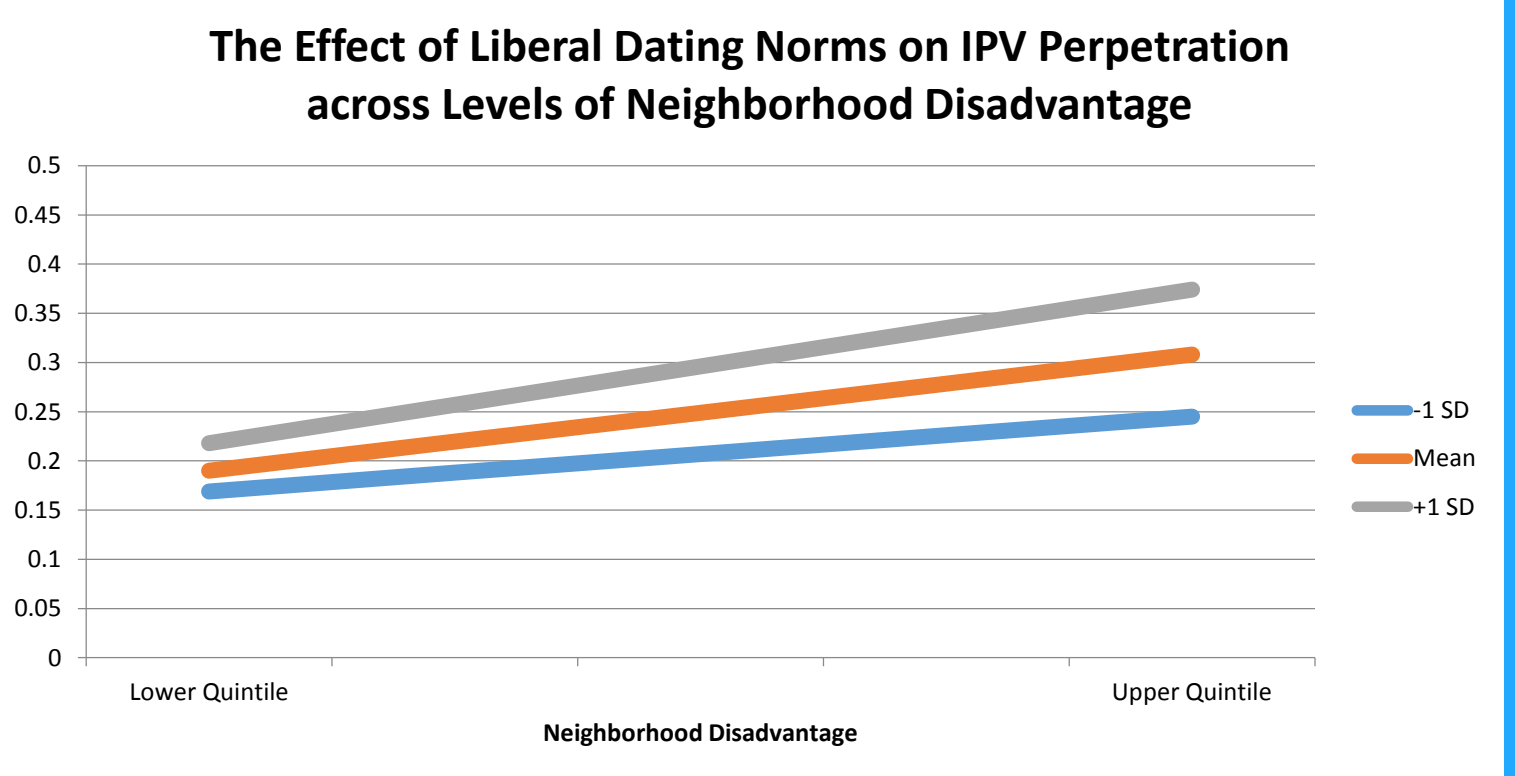
## Analyses

- 3-level hierarchical logistic regression model (HLM 7)

Multilevel Logistic Regression of Relationship Violence on Liberal Dating Norms (n = 6158)

Variable	Model 1		Model 2		Model 3		Model 4		Model 5	
	B	SE	B	SE	B	SE	B	SE	B	SE
Intercept	-1.42***	0.06	-1.42***	0.07	-1.53***	0.05	-1.53***	0.05	-1.54***	0.05
<b>Level One Variables</b>										
Age	0.58***	0.10	0.58***	0.10	0.60***	0.10	0.61***	0.11	0.61***	0.11
Age <sup>2</sup>	-0.01***	0.00	-0.01***	0.00	-0.02***	0.00	-0.02***	0.00	-0.02***	0.00
<b>Individual Attitudes and Beliefs</b>										
Liberal dating norms	0.20***	0.03	0.20***	0.04	0.23***	0.04	0.22***	0.04	0.21***	0.03
<b>Time-Varying Contextual Effect</b>										
Aggregate liberal dating norms			0.01	0.08	-0.01	0.07	-0.06	0.08	-0.05	0.08
<b>Level Three Variables</b>										
Neighborhood Liberal Dating Norms							0.17	0.25	0.16	0.25
Neighborhood Disadvantage							0.02*	0.01	0.02†	0.01
Individual liberal dating norms x Neighborhood disadvantage									0.01†	0.00
Level 2 residual $\sigma^2$	0.81		0.81		0.77		0.78		0.77	
Level 3 residual $\sigma^2$	0.25		0.25		0.07		0.05		0.06	

† p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001  
Models 3-5 include controls for gender, family structure, and mother’s education at level 2.



Multilevel Logistic Regression of Relationship Violence on Neighborhood & Individual Gender Mistrust (n = 6158)

Variable	Model 1		Model 2		Model 3		Model 4	
	B	SE	B	SE	B	SE	B	SE
Intercept	-1.41***	0.06	-1.43***	0.06	-1.52***	0.05	-1.50***	0.05
<b>Level One Variables</b>								
Age	0.61***	0.10	0.58***	0.10	0.61***	0.10	0.62***	0.11
Age <sup>2</sup>	-0.02***	0.00	-0.01***	0.00	-0.02***	0.00	-0.02***	0.00
<b>Individual Attitudes and Beliefs</b>								
Gender mistrust	0.16***	0.04	0.16***	0.04	0.12**	0.04	0.09*	0.04
<b>Time-Varying Contextual Effect</b>								
Aggregate gender mistrust			0.22***	0.06	0.16*	0.06	0.06	0.07
<b>Level Three Variables</b>								
Neighborhood Gender Mistrust							0.95**	0.30
Neighborhood Disadvantage							0.01	0.01
Level 2 residual $\sigma^2$	0.82		0.81		0.79		0.81	
Level 3 residual $\sigma^2$	0.26		0.21		0.07		0.04	

† p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001  
Models 3 and 4 include controls for gender, family structure, and mother’s education at level 2.

## Results

- Liberal dating norms appear to be more salient than the neighborhood normative climate with regard to such attitudes; however, the effect of liberal norms was exacerbated at higher levels of disadvantage
- Both individual- and aggregate-level measures of gender mistrust exerted independent effects on the odds of perpetration, and neighborhood levels of mistrust explained a substantial portion of the between-neighborhood variation in IPV

## Limitations/Future Research

- Explore these pathways in other cities/samples
- Consider additional normative and cultural definitions
- Examine these processes across a broader age range

## Conclusions

- Move beyond notion that “IPV knows no class boundaries”
  - The neighborhood normative climate has implications for IPV perpetration
  - These neighborhood effects depend, in part, on the level of disadvantage
- Findings suggest that future programs may benefit from a community-based approach to IPV
- Programmatic focus on potentially modifiable risk factors may prove more feasible than tackling issues of socioeconomic disadvantage

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# The Living Arrangements of Young Parents and Their Children

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## Background

Multigenerational households and “boomerang” children are a common phenomenon in the U.S. Moves in and out of the parental home seem particularly likely for young adults as the transition to adulthood has become more prolonged. One aspect of returning home that has yet to be explored, however, is the behavior of young parents. Such individuals have taken on an adult role (parenthood), but their lives tend to be unstable, making full residential independence unlikely.

## Research Questions

- Are young parents living independently?
- Of those living independently at birth or who subsequently move out, how many return home?
  - Do the odds of returning home vary by
    - Socioeconomic and demographic factors?
    - Fertility and child-related characteristics?
    - Union status and stability?
  - What are the family and household characteristics of those returning home?

## Data

National Longitudinal Survey of Youth, 1997 (NLSY97)

- Individuals born 1980-84 & interviewed annually

Analytical sample:

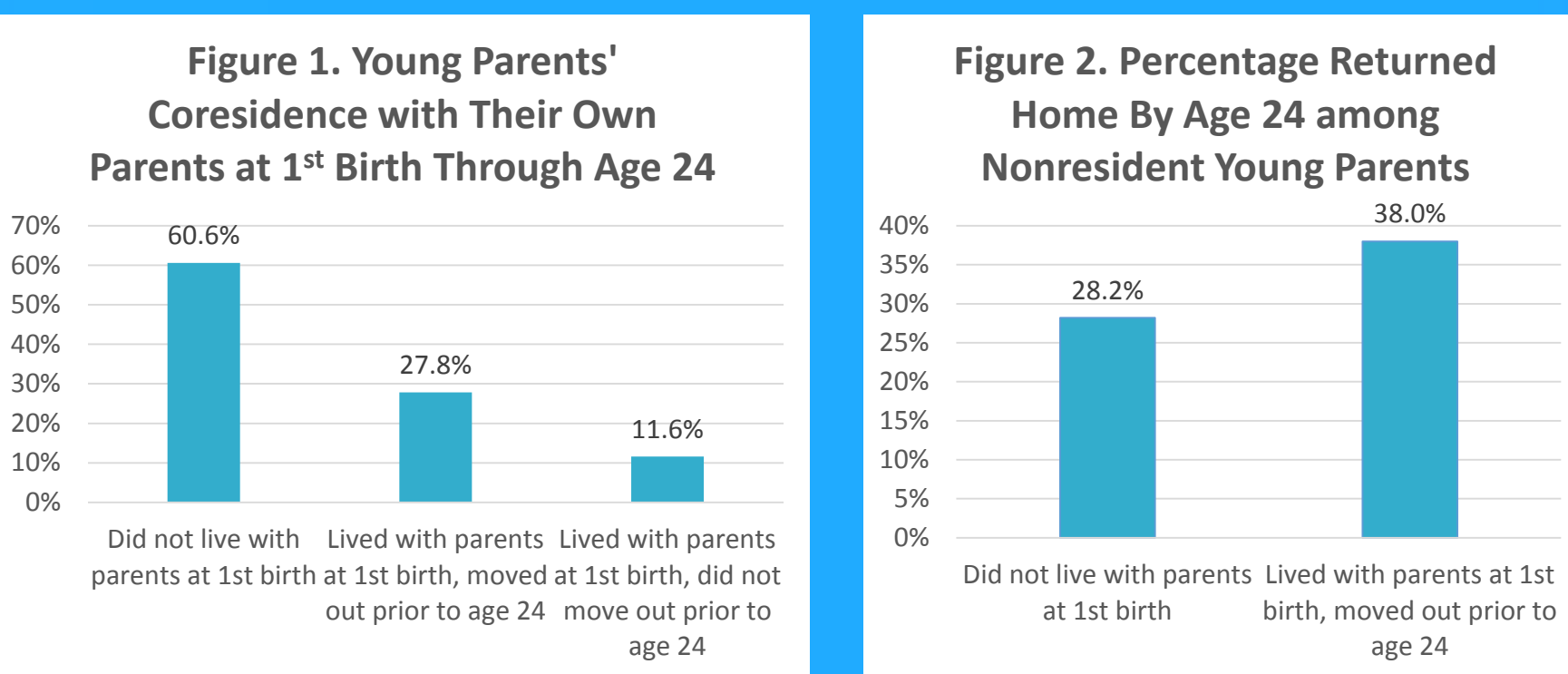
- Participate yearly through age 24 (N = 5,584)
- Had at least 1 child by age 24 (N = 1,984)

Covariates include age, gender, race-ethnicity, family structure at age 12, multigenerational household in the past, mother’s education & age at 1<sup>st</sup> birth, respondent’s education & enrollment, receipt of aid, number & coresidence of children, & union status

## Analytical Plan

- 1) Describe the living arrangements of young parents at birth through age 24. Living arrangements taken from yearly household rosters, linked to survey year of 1<sup>st</sup> birth:
  - Not living at home at 1<sup>st</sup> birth
  - Living at home at 1<sup>st</sup> birth, subsequently moved out
  - Living at home at 1<sup>st</sup> birth continuously through age 24
- 2) Identify characteristics associated with returning to the parental home among nonresident parents (N = 1,707)
  - Event history analysis using person-years
  - Enter analysis at 1<sup>st</sup> birth or when move out; censored at 1<sup>st</sup> parental coresidence or age 24 survey year
- 3) Examine the family & household characteristics of those who return home

## Descriptive Results



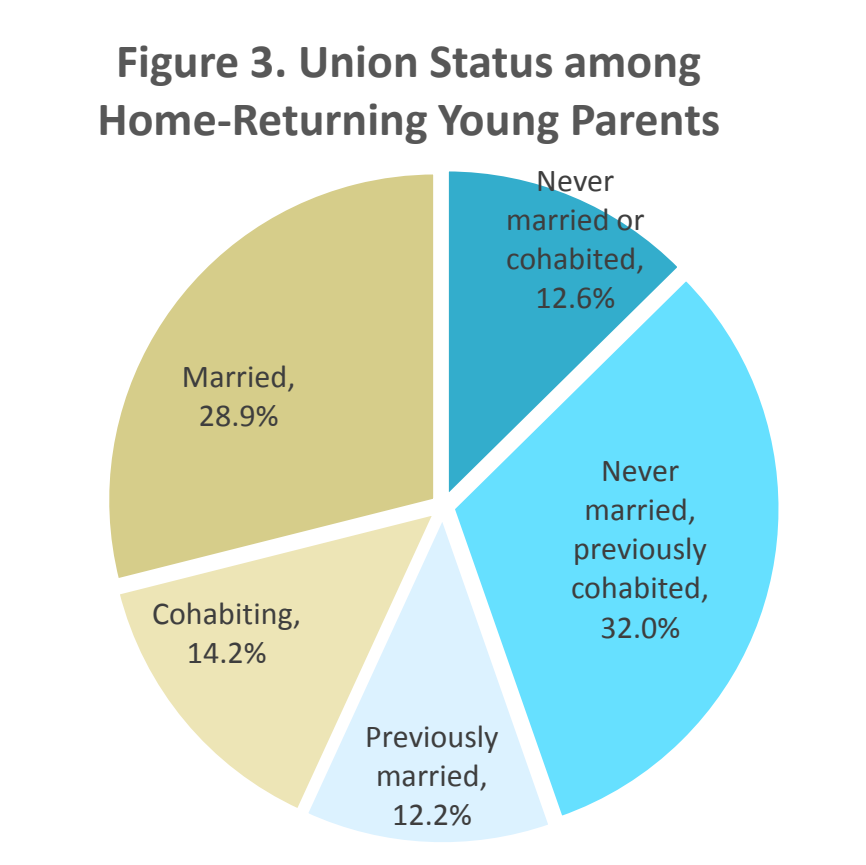
- 40% of young parents live with their parents at 1<sup>st</sup> birth
- Including those who lived at home continuously from birth through age 24, 56.5% of young parents live with their own parents at some point
- Significant variation across three types of living arrangements in socioeconomic and demographic factors, child-related characteristics, and union status

## Event History Results

- Do the odds of returning home vary by socioeconomic and demographic factors?** *Yes, but modestly*
- Odds increase with age and peak 2-3 years after birth or leaving the parental home the first time
  - Foreign-born Hispanics, those whose mother had some college, and those whose own education was less than HS had higher odds
  - Lower odds for those growing up in an “other” household
- Do the odds of returning home vary by child-related characteristics?** *Not really*
- Only those NOT living with their 1<sup>st</sup> child (a time-varying variable) are more likely to move home during the year
- Do the odds of returning home vary by union status & stability?** *Yes, strongly*
- Young parents with no coresidential union at either the prior or current survey are 2.4 times as likely to move home to their parents during the year than those stably partnered
  - Those who experienced a break-up are highly likely to move home (OR = 8.3 for cohabitators & OR = 6.5 for married)

## Descriptive Results for “Returners”

- Complicated households for “returners” (N = 561):
- 70% have all their children living with them
  - Nearly half are returning home to a single-parent family, with 21% returning to a stepfamily
  - 6% report their own grandparent or other relative is also present



## Summary

Young parents often live with their own parents either at birth or at some point thereafter, with over half of young parents reporting parental coresidence at least once by age 24. Union instability seems to be a strong predictor of moving back home. Interestingly, *not* living with one’s child also increases the odds of moving back home. For those who move back home, these multigenerational households are often complex, involving stepparents, the young parent’s own partner, and young children.

## Limitations

- Unable to more precisely define living arrangements at birth or between surveys
- Did not include income or employment status
- Parental coresidence definition excludes living with partner’s family
- Possible (but unlikely) that parents move in with adult children rather than vice versa
- Not measuring other residential changes

## Conclusions & Next Steps

This work demonstrates that young parents use their families as a safety net for many reasons. Research on adult children living with their own parents has largely focused on economic factors but should incorporate family behaviors. Similarly, work on young parents should expand beyond family structure instability to consider residential changes and instability in household composition.

This research was supported in part by the Center for Family and Demographic Research, Bowling Green State University, which has core funding from the Eunice Kennedy Shriver National Institute of Child Health and Human Development (R24HD050959).



# Preferences Constrained: Racial and Ethnic Variations in Parents’ Neighborhood Choice Considerations

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## Background

- Residential preferences are based on a variety of factors including life cycle and socioeconomic considerations, housing, and neighborhood racial composition (Woo and Morrow-Jones 2011; Farley, Fielding and Krysan 1997; Krysan and Farley 2002, Clark 2009)
- Less attention has been given to how other neighborhood characteristics, like neighborhood advantage, affect preferences
- Research suggests that whites and minorities have varying foci when choosing neighborhoods (Sigelman and Henig 2001; Lewis et al. 2011; Zonn 1984)

## Current Study

- 1) Do demographic characteristics predict which neighborhood characteristics parents say were most important in their choice of their present neighborhoods?
- 2) Are there are racial and ethnic differences in the salience of neighborhood characteristics by family socioeconomic status?
- 3) Does neighborhood racial/ethnic composition moderate the associations between an individual’s race/ethnicity and parents’ reasons for living in the neighborhood?

## Data, Sample, & Methods

- National Longitudinal Study of Adolescent to Adult Health (Add Health)
- Add Health respondents with completed parent questionnaire
- Analytic sample: 13,818 respondents
- Factor analyses and multilevel multinomial logistic regressions

## Measures

- Dependent Variable**  
Which one statement describes the **most** important reason why you live in this neighborhood?
- **Less crime:** Less crime and less illegal activity by adolescents
  - **Better schools:** Better schools or children of appropriate ages
  - **Other:** Near old workplace, near current workplace, had outgrown previous housing, affordable good housing, close to friends or relatives, born here
- Focal Independent Variables**
- **Neighborhood advantage:** Mean scale of prop. aged 25+ with a bachelor’s degree or more, prop. age 16+ employed in a managerial or professional occupation, and prop. earning \$50k or more
  - **Proportion white**
  - **Parent’s Race/Ethnicity**

## Results

Figure 1. Crime as the Focal Consideration by Parent’s Race/Ethnicity

Figure 2. Schools as the Focal Consideration by Parent’s Race/Ethnicity

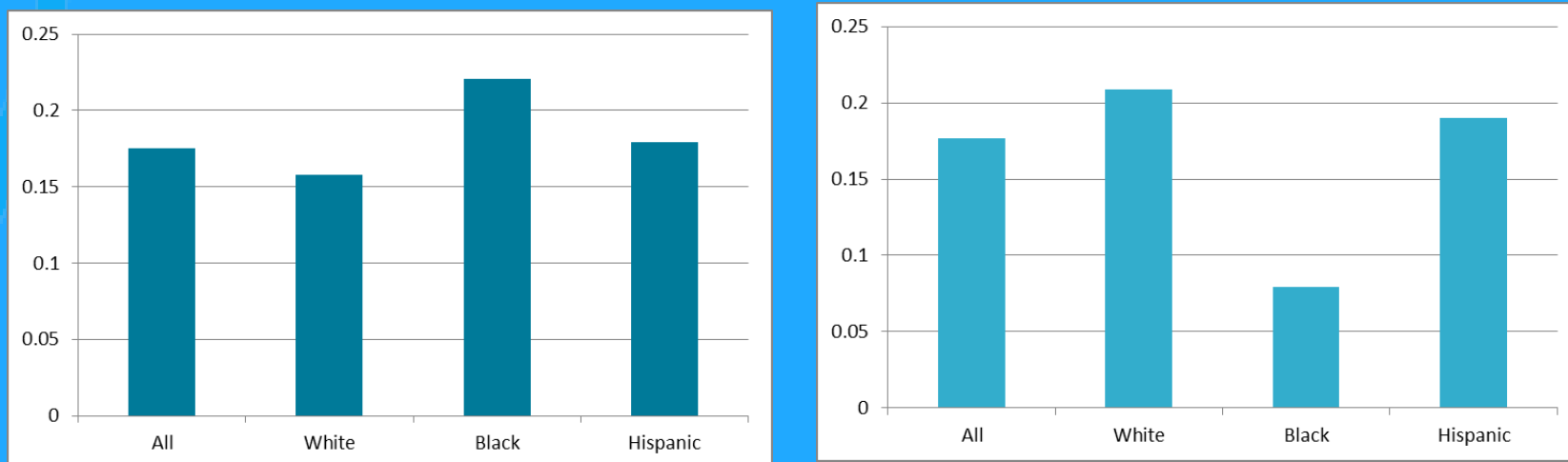


Figure 3. Centrality of Crime by Neighborhood Proportion White

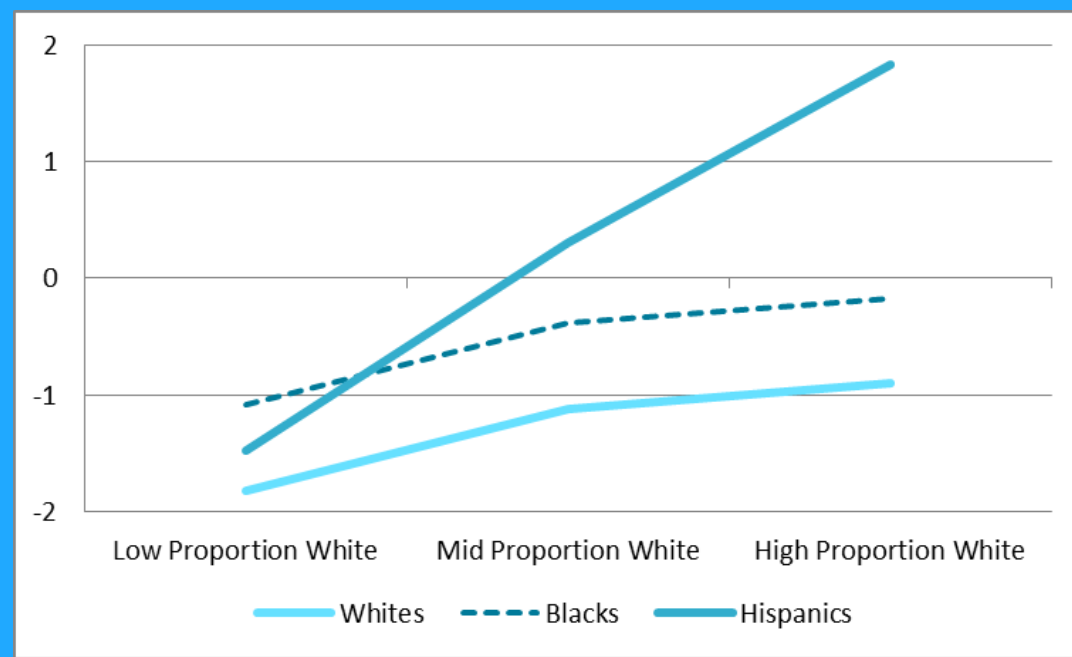


Figure 4. Centrality of Schools by Neighborhood Advantage

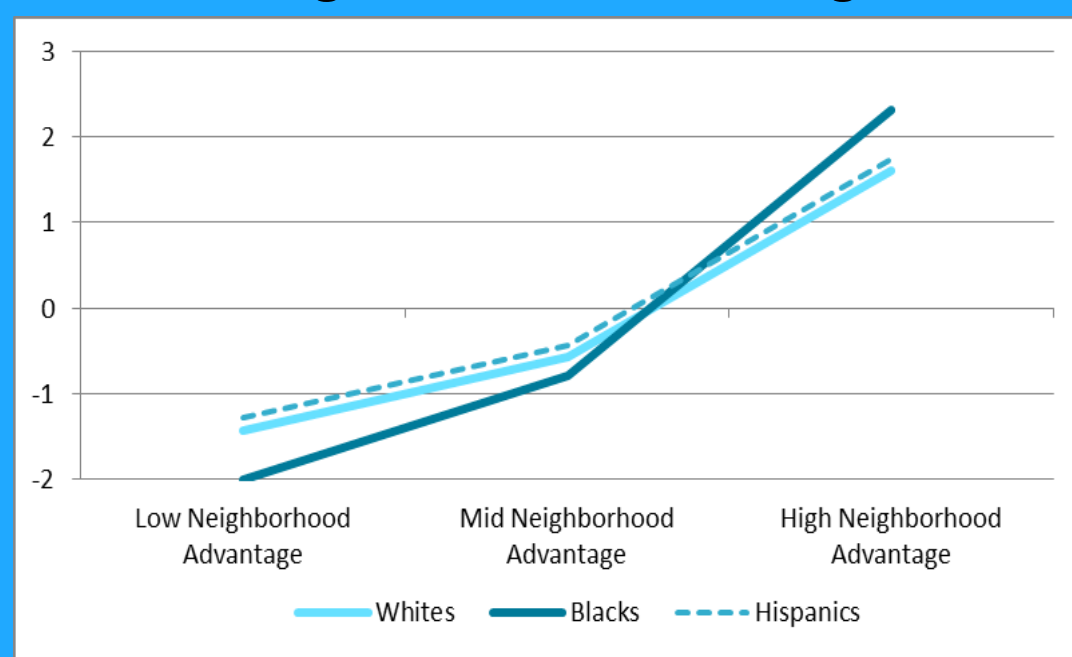
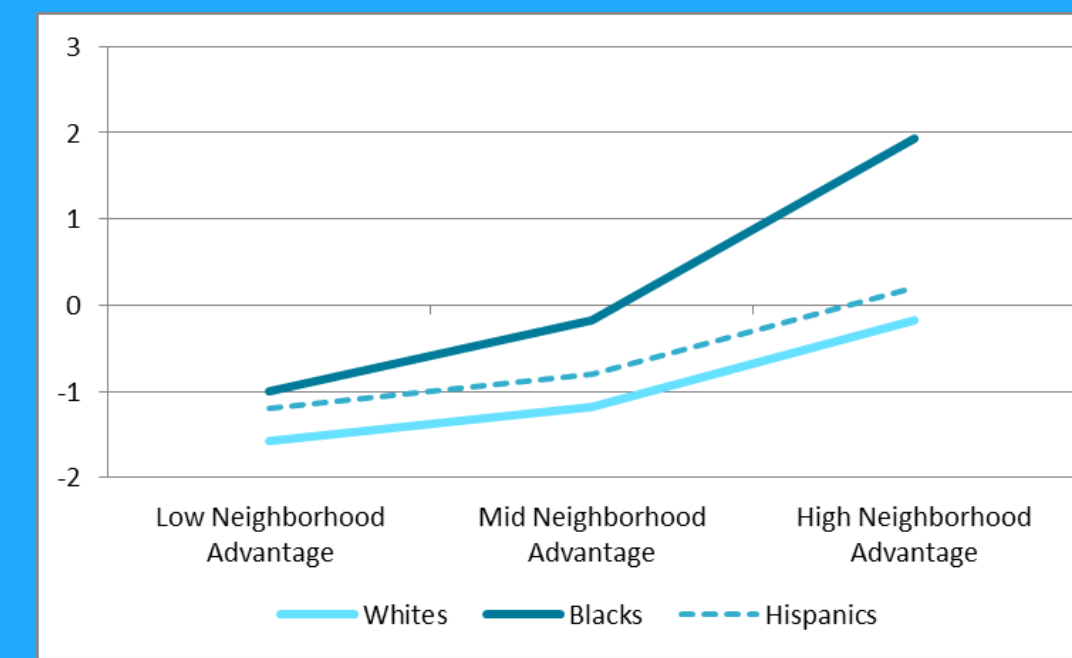


Figure 5. Centrality of Crime by Neighborhood Advantage



All models include control variables; dashed lines indicate non-significant differences

Table 1. Multinomial Multilevel Models of Parents’ Focal Consideration in Choice of Neighborhoods

Variable	Model 1		Model 2		Model 3	
	Schools	Crime	Schools	Crime	Schools	Crime
	vs. Other	vs. Other	vs. Other	vs. Other	vs. Other	vs. Other
Level-1	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
Black	-0.73***	0.47***	-0.31**	0.80***	-0.59***	0.55***
Hispanic	0.01	0.32***	0.15	0.43***	0.16	0.39***
Level-2						
Urban	0.13	-0.32***	0.30**	-0.20**	-0.03	-0.40***
Prop. White N’Hood Advantage			1.62***	1.07***	0.04***	0.02***
Intercept	-1.47***	-1.62***	-1.81***	-1.85***	-1.44***	-1.59***

\*p<0.05, \*p<0.01, \*p<0.001; Includes controls for parent’s age and gender, child’s age and gender, family SES, years in residence, two biological parents, and number of children in household

## Conclusions

- Black and Hispanic parents are more likely to choose neighborhoods on the basis of crime
- Black parents are much less likely (than whites) to choose neighborhoods based on schools
- Neighborhood advantage of chosen neighborhoods moderates associations between race/ethnicity and neighborhood considerations

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# Change in Stability of Premarital Cohabitation, 1980-2009

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## Background

- Remarkable increase in prevalence of cohabitation in the past quarter century
- Cohabitation in the US is short-lived
  - Half of all first premarital cohabitations among women aged 15-44 dissolve within 22 months (Copen et al. 2013)
- Reduced selection - diffusion perspective (Leifbroer & Dourleijn 2006; Manning & Cohen 2012)

## The Present Study

- Stability of two comparable cohabitation cohorts (1980-1984 and 2005-2009)
- Expanded interval between the cohabiting cohorts
- Utilizes more recent data (2011-2013 NSFG)
- Shifts in the duration of cohabitation based on presence of children, race/ethnicity, and education

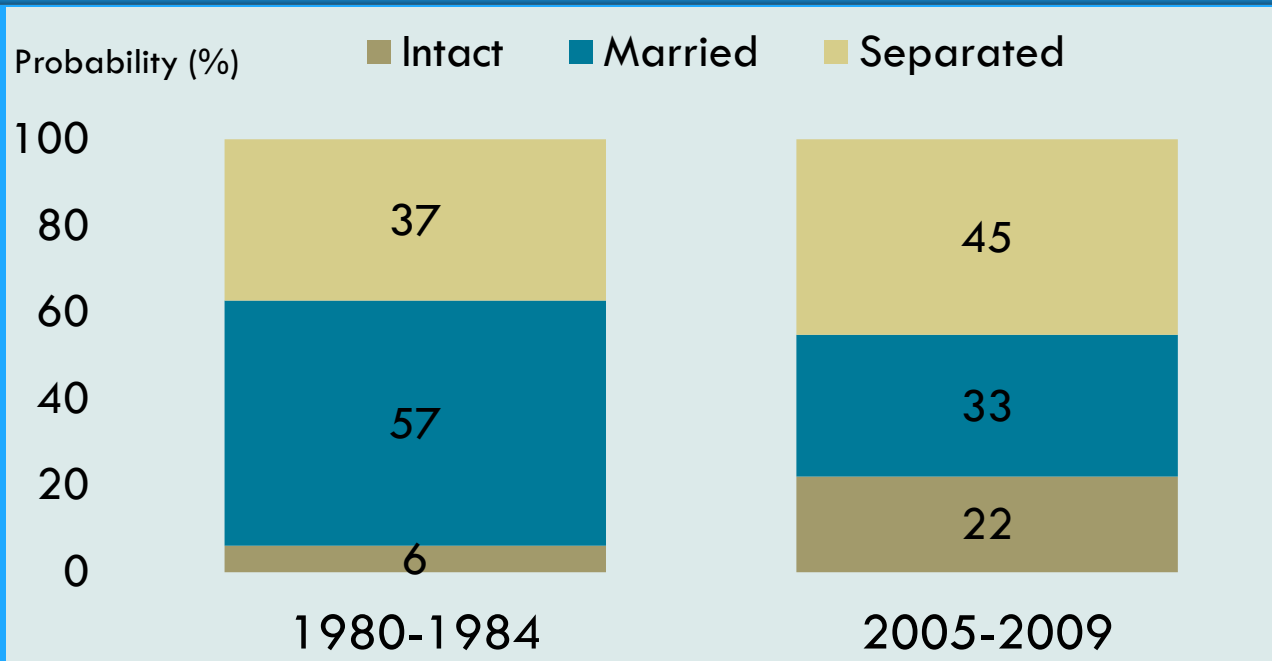
## Data and Sample

- The National Survey of Family Growth
- Cycle 4 (1988) and the 2011-2013 interview
- Combined sample size of 1479 women aged 15-44 (707 in 1980-1984 cohort, 772 in 2005-2009 cohort)

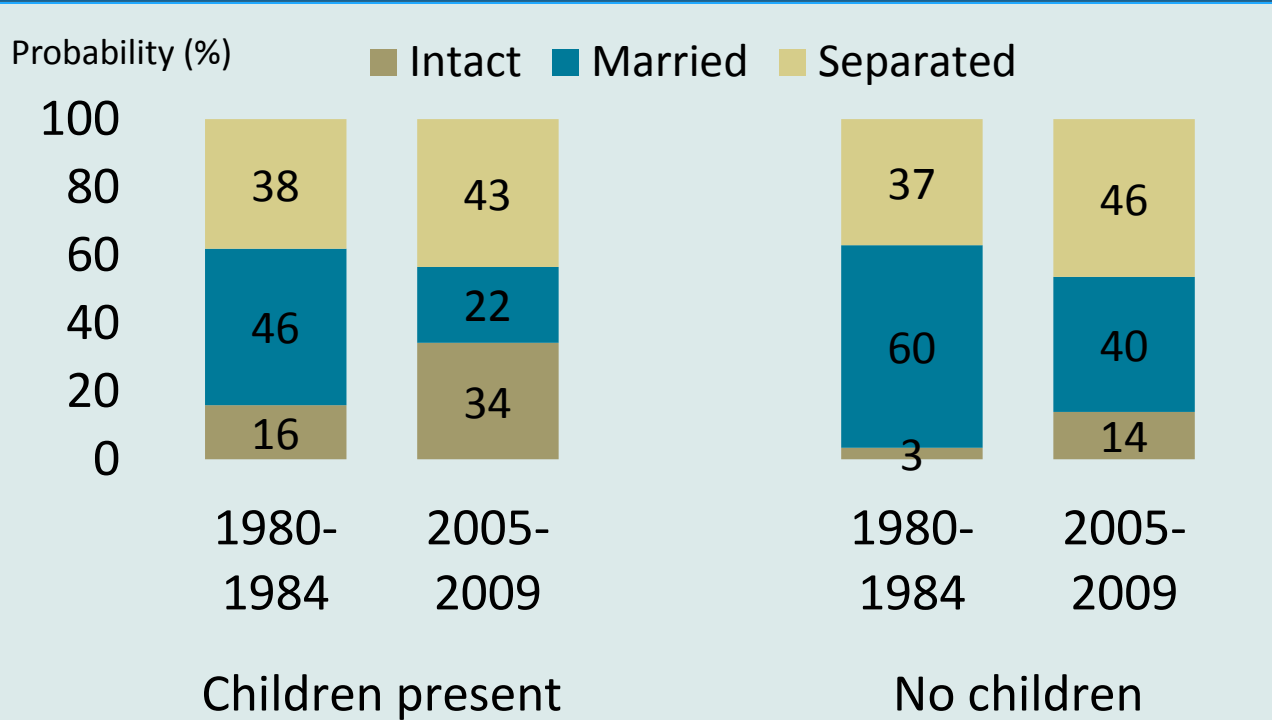
## Method

- Multiple decrement life tables
- Discrete-time multinomial logistic regression
- Outcome of first premarital cohabitation (0 = intact, 1 = marriage, 2 = dissolution)

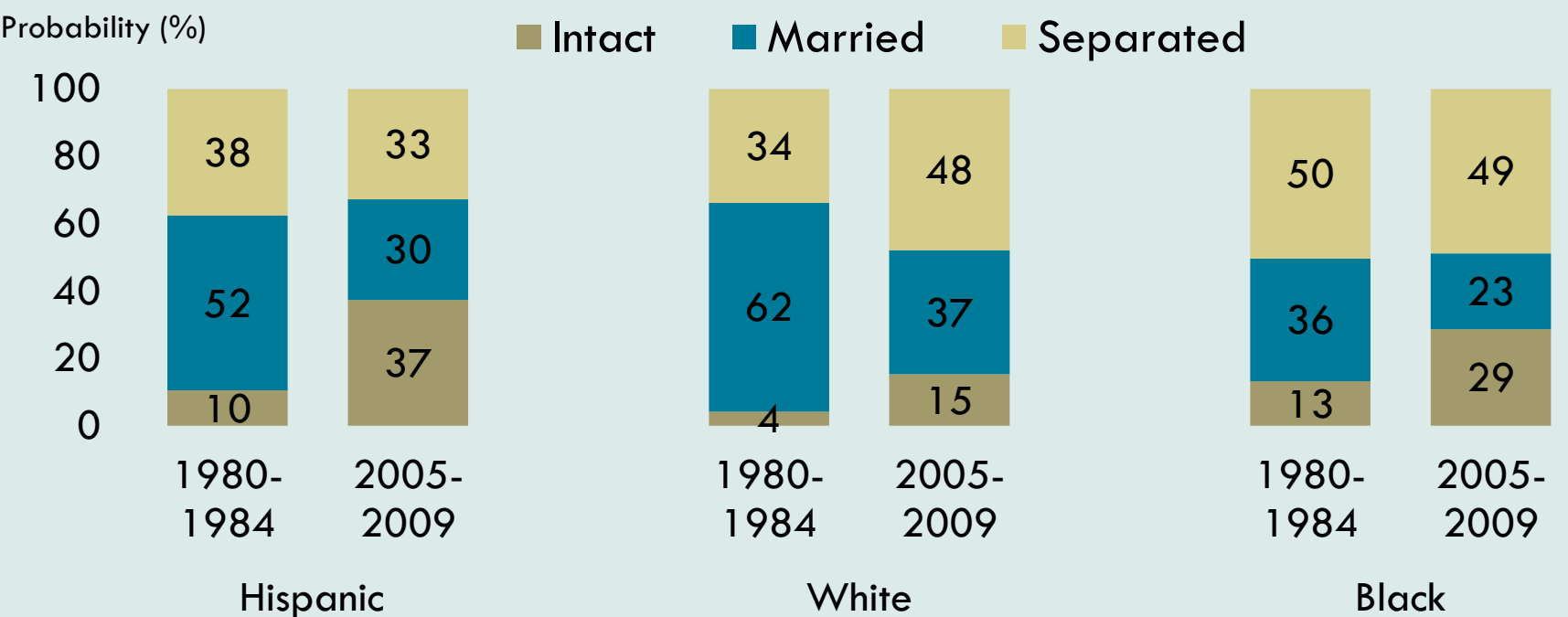
## Probability of Survival and Dissolution of First Premarital Cohabitation within Five Years



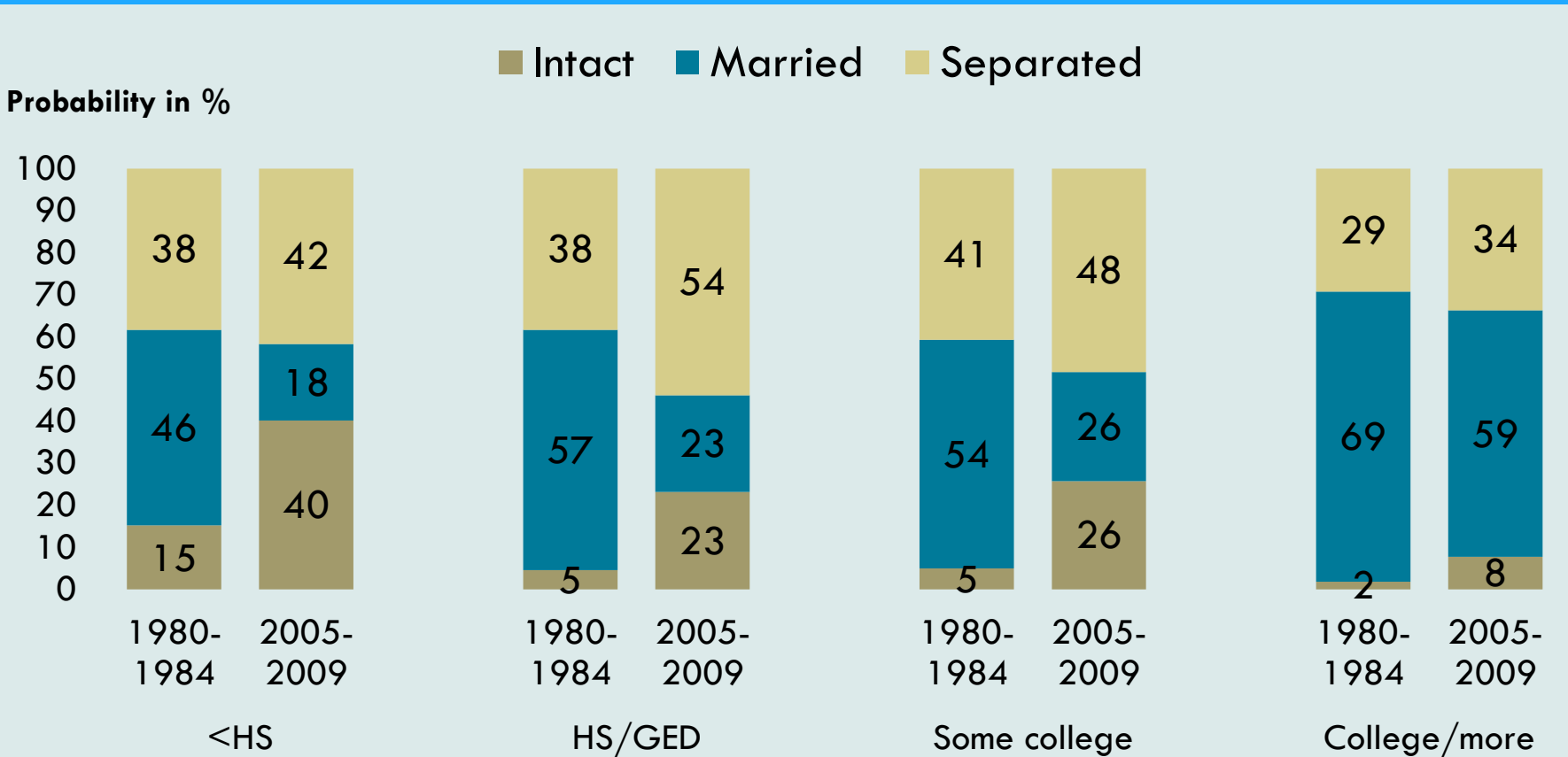
## Presence of Children and Outcomes of First Premarital Cohabitation within Five Years



## Race/Ethnicity and Outcomes of First Premarital Cohabitation within Five Years



## Education and Outcomes of First Premarital Cohabitation within Five Years



## Multivariate Results

Relative Risk Ratios from Multinomial Logistic Regression of Transitions Out of First Premarital Cohabiting Unions								
Predictors	Model 1		Model 2		Model 3		Model 4	
	Marriage vs. intact	Dissolution vs. intact	Marriage vs. intact	Dissolution vs. intact	Marriage vs. intact	Dissolution vs. intact	Marriage vs. intact	Dissolution vs. intact
Cohort (1980-1984 = 0)								
2005-2009	0.40***	0.79*	0.39***	0.77†	0.45***	0.88	0.43***	0.87
Socio-demographic characteristics								
Race/Ethnicity (White = 0)								
Hispanic			0.85	1.03			1.01	1.44
Black			0.46***	0.99			0.54**	1.65**
Other			0.63	1.18			0.71	1.32
Education (<HS = 0)								
HS/GED			1.59*	1.39			1.45†	1.32
Some college			1.40	1.35			1.14	1.20
College degree or more			1.69*	0.99			1.18	0.97
Non-intact family at age 14			0.79†	0.85			0.81	0.82
Lives in metropolitan area			0.69*	1.18			0.67**	1.30
Relationship Characteristics								
Age at first cohabitation					1.03*	0.95*	1.04*	0.95*
Has a child					0.47***	0.57***	0.62*	0.44***
Intercept	0.03***	0.02***	0.04***	0.01***	0.02***	0.05***	0.02***	0.04***

Note: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ , †  $p < 0.10$

## Conclusion

- Recent cohabitations last longer than those formed 30 years ago (on average 27.7 months)
- The lengthening of cohabitation results mostly from the declining rate of transitioning to marriage
- Cohabitations with children last longer than those without children
- Blacks and Whites are similarly likely to remain together, Blacks more often remain cohabiting and Whites transition into marriage
- Increasing education divergence in the stability of cohabiting unions

## Next Steps

- Explain the shift in cohabitation stability
- Explore the stability of postmarital cohabitation
- Integrate serial cohabitation into analyses

## Implications

- Institutionalization of cohabitation
- Evolving relationship between cohabitation and marriage
- Shifting implications of cohabitation for child outcomes

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# Pet Ownership and Access as Predictors of Self-Reported Health in a National Sample of U.S. Elders

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## Background

- Growing research, media, and policy attention explores pets as therapy, companion, and exercise animals for elders.
- The National Institutes of Health calls for more research on human-animal interactions (HAI) with a focus on health and national samples.

## Prior Research

- Animal companions are associated with physical, psychological, and emotional benefits.
- Animal companions facilitate a “ripple effect” of social interactions, favor exchanges, and neighborliness.
- Most studies on animal companions and elders’ well-being use institutionalized samples or small convenience-based samples.
- No research distinguishes between ownership versus access to animal companions.
- Very little and largely qualitative research addresses racial/ethnic minorities and animal companions.

## Present Study

- Our study explores patterns of pet ownership and access to animal companions across racial/ethnic groups.
- We also examine the effects of pet ownership and access on elders’ self-reported health, controlling for sociodemographic, economic and social capital, religiosity, and physical activity indicators.
- Last, we test how race/ethnicity mediates and moderates the effects of pet ownership and access on elders’ self-reported health.

## Data and Sample

- Health and Retirement Study (HRS, University of Michigan, and supported by the National Institute of Aging and Social Security Administration).
- We use the sub-sample from Module 9 on Human-Animal Interaction from the 2012 wave of HRS.
- We select elders age 50 and older for a final effective sample size of 1,658.

Table 1. Pet Owner Status and Current Pet Access by Race (%)				
	Total	White	Black	Hispanic
Currently Own	45.7	50.4	22.3	52.1
Owned, Access	20.7	23.0	14.8	15.5
Owned, No Access	23.8	21.1	39.5	16.5
Never Owned, Access	3.0	1.7	6.2	6.2
Never Owned, No Access	6.9	3.8	17.2	9.8
N=	1658	1173	291	194

Chi-Square=176.983, p < 0.000

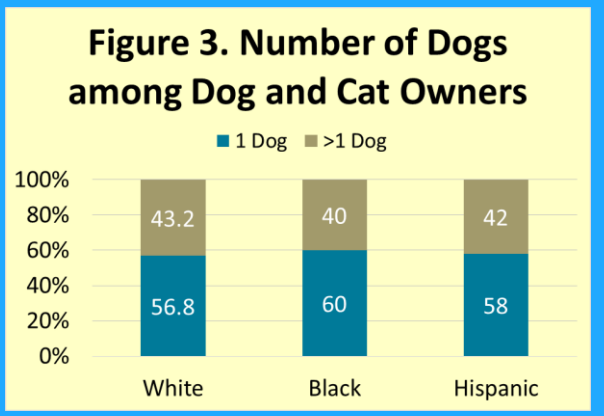
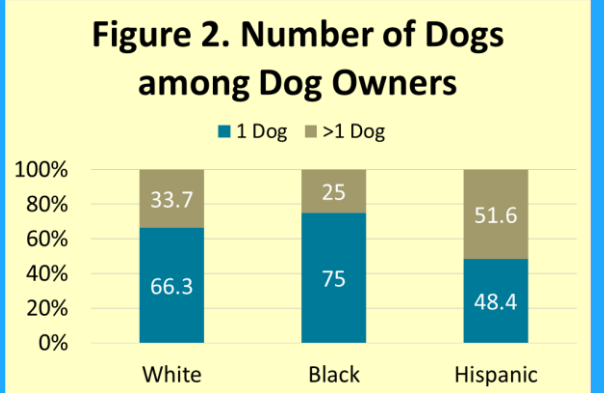
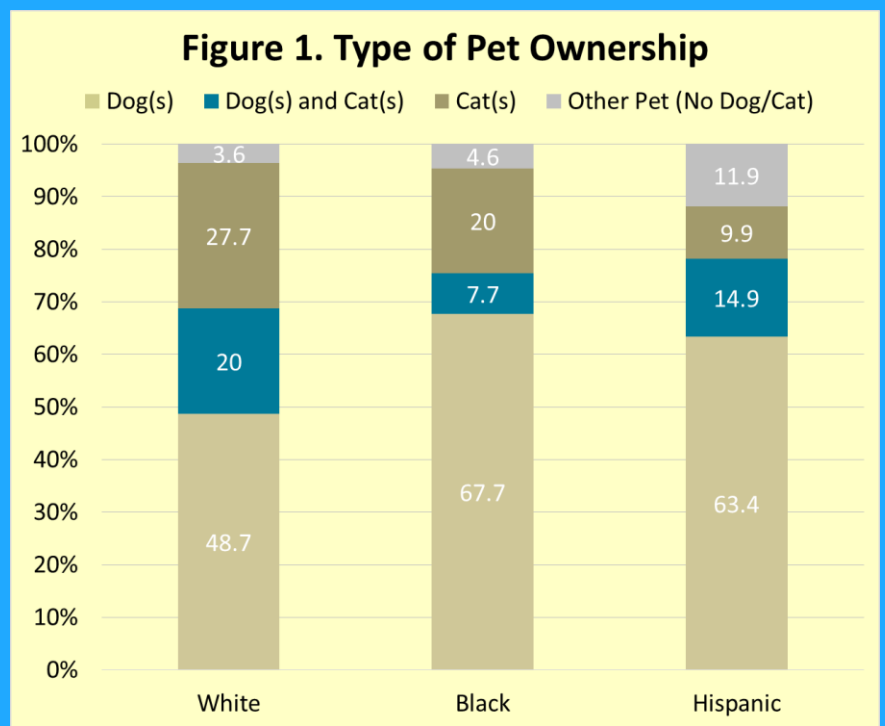


Table 2. Pets Other Than Cats and Dogs by Race				
	Total	White	Black	Hispanic
Any Other Pet**	15.5	14.0	10.8	26.7
Small Mammal	0.8	1.0	0.0	0.0
Bird***	6.5	5.6	1.5	14.9
Fish	5.8	5.1	6.2	9.9
Reptile	0.9	0.8	1.5	1.0
Other	3.4	3.9	1.5	2.0
N=	757	591	65	101

Significant differences between racial/ethnic groups p< 0.01 = \*\*, p< 0.001 = \*\*\*

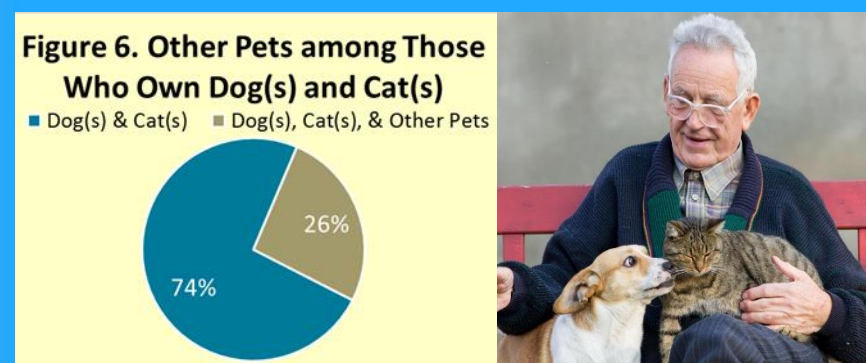
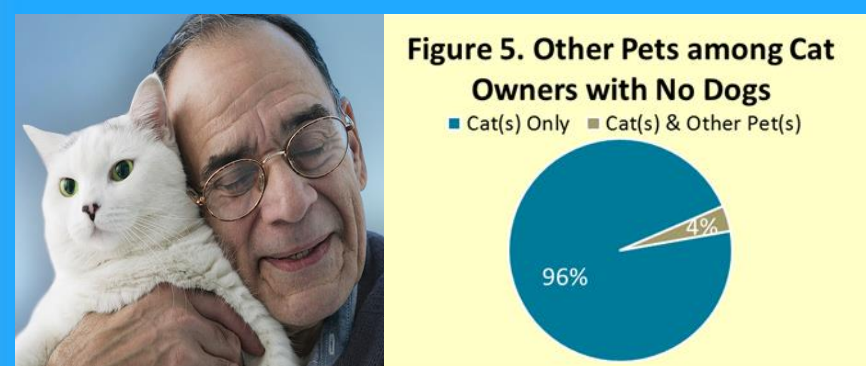
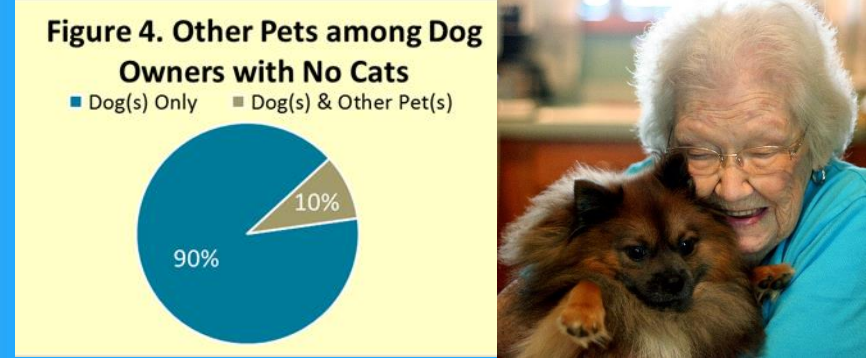


Table 3. Regression Models for Pet Ownership and Access on Self-Rated Health			
	Model 1	Model 2	Model 3
<b>Independent</b>			
Owned, Access <sup>a</sup>	0.133 <sup>†</sup>	0.149 <sup>*</sup>	0.131 <sup>*</sup>
Owned, No Access <sup>a</sup>	-0.093	0.007	0.042
Never Owned, Access <sup>a</sup>	-0.119	0.071	-0.100
Never Owned, No Access <sup>a</sup>	-0.235 <sup>*</sup>	-0.006	0.098
<b>Sociodemographic</b>			
Age	-0.009 <sup>**</sup>		0.000
Female <sup>a</sup>	0.103 <sup>*</sup>		0.127 <sup>*</sup>
<b>Race/Ethnicity</b>			
Black, Non-Hispanic <sup>a</sup>	-0.120 <sup>†</sup>		-0.143 <sup>†</sup>
Hispanic <sup>a</sup>	-0.282 <sup>***</sup>		-0.330 <sup>***</sup>
Total Assets (logged)	0.247 <sup>***</sup>		0.170 <sup>***</sup>
<b>Union Status</b>			
Cohabiting <sup>a</sup>	-0.198 <sup>†</sup>		-0.134
Separated/Divorced <sup>a</sup>	-0.223 <sup>**</sup>		-0.184 <sup>*</sup>
Widowed <sup>a</sup>	-0.047		-0.032
Never Married <sup>a</sup>	-0.014		0.092
Marital Status Missing	-0.016		0.029
<b>Respondent Education</b>			
Less than High School <sup>a</sup>	-0.159 <sup>*</sup>		-0.059
Some College <sup>a</sup>	0.178 <sup>†</sup>		0.142 <sup>†</sup>
College <sup>a</sup>	0.329 <sup>***</sup>		0.300 <sup>***</sup>
Graduate/Professional <sup>a</sup>	0.392 <sup>***</sup>		0.289 <sup>***</sup>
<b>Mother's Education</b>			
Less than High School <sup>a</sup>	-0.112 <sup>†</sup>		-0.083
Some College <sup>a</sup>	-0.070		-0.023
College Plus <sup>a</sup>	0.098		0.067
Education Missing	-0.335 <sup>***</sup>		-0.268 <sup>**</sup>
<b>Parenting</b>			
At Least One Child <sup>a</sup>	0.150		0.112
More than One Child <sup>a</sup>	0.013		-0.027
Unknown # of Children	-0.254		-0.418 <sup>*</sup>
<b>Social Support and Activity</b>			
Extreme Religiosity Index			0.044 <sup>*</sup>
Activity Scale			0.137 <sup>***</sup>
Intercept	3.199 <sup>***</sup>	0.409	0.058
Adjusted R <sup>2</sup>	0.006	0.140	0.235
P<.1 <sup>†</sup> , P<.05 <sup>*</sup> , P<.01 <sup>**</sup> , P<.001 <sup>***</sup> N=1,658			

<sup>a</sup> Reference categories as follows: current owner, male, white, married, high school (respondent), high school (mother), no children

## References

McCardle, Peggy, Sandra McCune, James A. Griffin, Layla Esposito, and Lisa S. Freund (Eds.) 2011. *Animals in Our Lives: Human-Animal Interaction in Family, Community, and Therapeutic Settings*. Baltimore, MD: Paul H. Brookes Publishing.

Wood, Lisa Jane. 2011. Community benefits of human-animal interactions...the ripple effect. In Peggy McCardle, Sandra McCune, James A. Griffin, and Valerie Maholmes (Eds.) *How Animals Affect Us: Examining the Influence of Human-Animal Interaction on Child Development and Human Health*. Washington, DC: American Psychological Association.

## Conclusions

- We find racial/ethnic differences in pet ownership and access.
- Blacks and Hispanics have poorer self-reported health than Whites; Hispanics have worse self-reported health than Blacks.
- Race/ethnicity mediates, but does not moderate, the effects of pet ownership and access.
- **Core Finding: Self-reported health for elders is higher for those who owned pets, but now simply have access to companion animals, as compared to those who currently own and maintain responsibility for pets.**

## Limitations

- The HRS HAI module does not include retrospective pet ownership histories for those who are current owners.
- Nor does the module include numbers of pets in the retrospective histories.
- The 2012 HAI module is cross-sectional, so we cannot test causal relationships between pet ownership and access and race/ethnicity on self-reported health.

## Future Research

- Explore effects of pet ownership and access on specific medical conditions.
- Design population-based studies on potential reasons why current access, but not currently owning a companion animal facilitates better self-reported health among elders.
- Conduct qualitative research on the contextual reasons for differences found across racial/ethnic groups.



# Trends in Nonmarital Birth Rates and Approval of Nonmarital Childbearing in Western Countries

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## Nonmarital Childbearing

- Steady increase in proportion of nonmarital births in Western countries
- Large variation across countries – why?
  - Differences in nonmarital unions
  - Differences in social policy
  - Differences in women's employment
  - Differences in attitudes and social norms
- Comparative research linking attitude and levels of nonmarital childbearing is scarce

## Why Might Attitudes Matter?

### Second Demographic Transition Theory

- Weakening of traditional attitudes toward marriage and childbearing
- Increased emphasis on individual autonomy and self-actualization

### Theory of Planned Behavior

- Behavior is more likely to occur if individuals maintain positive attitudes toward the behavior
- Attitudes may impact behavior more if the behavior has some support in society
- Regardless of individual attitudes, behavior is discouraged if it is not supported by broader norms

## Research Questions

- How have countries changed over time in both attitudes towards single parents and levels of nonmarital childbearing?
- Are nonmarital childbearing and attitudes correlated, and have these correlations changed over time?
- Does the pace of changes in nonmarital childbearing predict level of support for nonmarital childbearing?

## Data

Attitudinal data:

- Three waves (1994, 2002, 2012) from the International Social Survey Programme and General Social Survey

Nonmarital birth ratios (NMBRs):

- Eurostat, National Center for Health Statistics (US), Statistics Canada, & Australian Bureau of Statistics
- Used linear extrapolation for missing NMBRs
- Limited US data to non-Hispanic whites

## Measures

Key dependent variable

- Proportion of births that are nonmarital

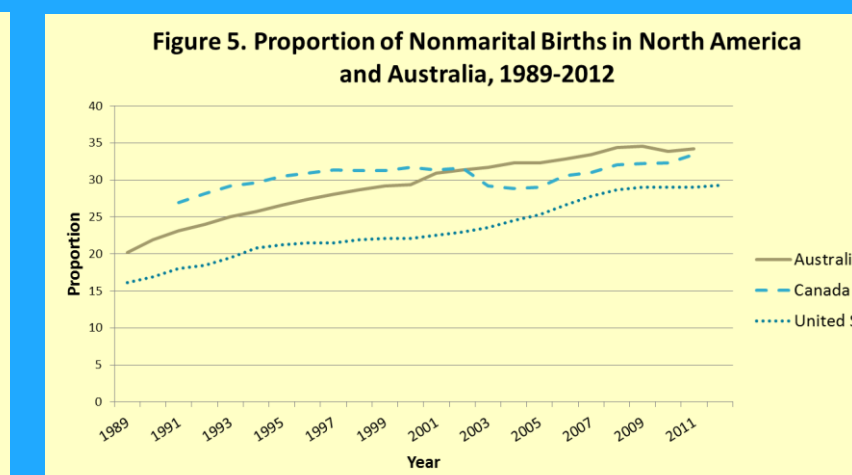
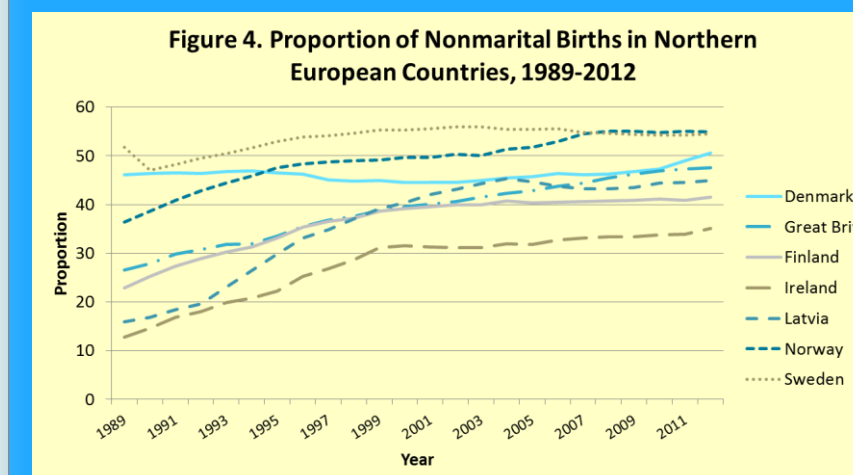
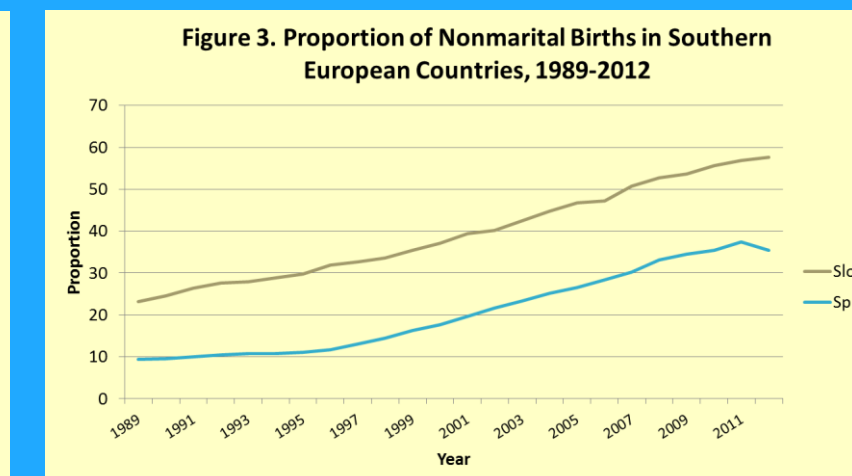
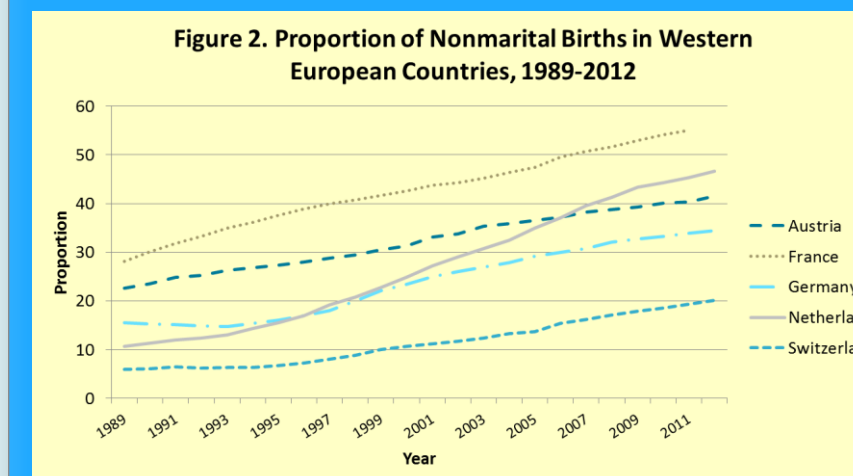
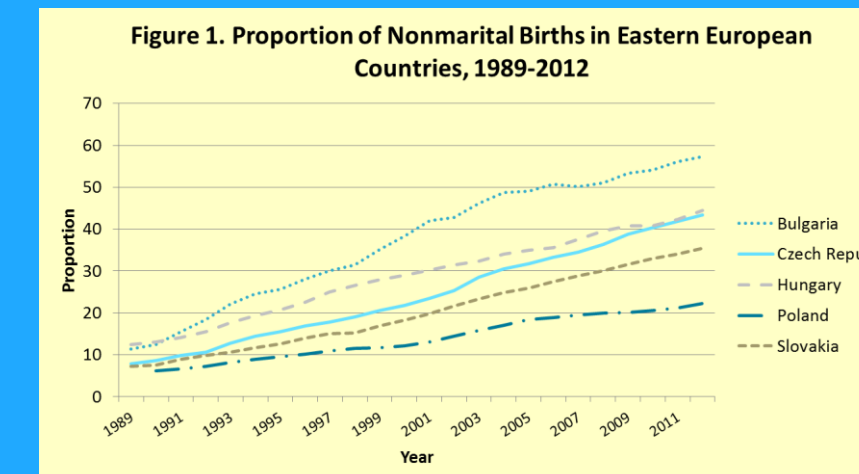
Independent variable

- Attitude toward nonmarital childbearing/single parenthood is proxied by responses to the statement "If people want to have kids they ought to get married."
  - Used as a proxy for support for nonmarital childbearing in other research (Thornton & Young-DeMarco 2001; Gubernskaya 2010)

Table 1. Proportion Who Disagree or Strongly Disagree with the Statement "People Who Want Children Ought to Get Married," 1994, 2002, 2012.

	1994	2002	2012		1994	2002	2012
<i>Eastern Europe</i>				<i>Northern Europe</i>			
Bulgaria	17.8	17.7	29.9	Denmark	38.8	47.6	
Czech Republic	14.3	22.5	19.3	Finland		36.3	41.5
Hungary	27.0	35.8		Great Britain	26.4	30.1	34.5
Poland	14.7	16.8	25.4	Ireland	19.3	34.2	46.8
Slovakia		13.9	15.3	Latvia		22.9	24.0
<i>Western Europe</i>				Norway	30.7	38.2	44.3
Austria	29.0	37.9	36.4	Sweden	35.9	41.6	
France		44.8	50.7	<i>North America &amp; Australia</i>			
Germany	32.2	35.2	46.9	Australia	17.3	19.9	35.8
Netherlands	53.8	57.0		Canada	36.8		27.7
Switzerland		39.5	38.7	U.S.	16.4	18.9	20.1
<i>Southern Europe</i>							
Slovenia	45.9	49.1	59.8				
Spain	40.9	55.4	69.5				

## Nonmarital Birth Ratios Over Time by Region



## Multivariate Analysis

Two stages

- Regress nonmarital birth ratio on time in five-year groups corresponding to five years preceding each attitudinal measure
  - Centered time variable
  - Time coefficient represents pace of fertility change
- Pool data into country-level analysis (n = 57) to predict attitudes
  - Hausman test to determine fixed vs. random effects
  - Control for compositional differences as measured in surveys

## Correlations and Multivariate Results

Table 2. Correlations between NMBRs and Attitudes

	1994 Attitudes	2002 Attitudes	2012 Attitudes
NMBRs five years earlier			
NMBR 1989	.17		
NMBR 1997		.18	
NMBR 2007			.33
NMBRs same year			
NMBR 1994	.15		
NMBR 2002		.21	
NMBR 2012			.25
NMBRs ten years later			
NMBR 2004	.23		
NMBR 2012		.22	

Table 3. Regression Models Predicting Supportive Nonmarital Childbearing Attitude for Total Sample (n=57)

	Model 1		Model 2	
	B	SE	B	SE
Baseline NMBR	0.28*	0.14	0.24*	0.14
Time				
Slope	0.10	1.41	-0.10	1.13
Year				
1994 (ref)				
2002	3.18	2.07	3.89†	2.15
2012	5.99*	3.04	5.52	4.15
Demographic Characteristics				
Female			0.80**	0.29
Age			-0.62*	0.30
Rel. Attendance			-0.22*	0.11
Education			0.20	0.11
Employed			0.08	0.11
Married			-0.09	0.12
Constant	22.23***	4.43	9.85	25.70
R <sup>2</sup>	0.13		0.15	

- Correlations are not statistically significant

## Limitations

- No direct measure of support for nonmarital childbearing
- Lack of information on nonmarital unions, (i.e., cohabitations)
- Limited availability of measures to account for compositional differences across countries
- Not controlling for policy measures or other economic/institutional/structural factors

## Conclusions

- Overall, attitudes toward single parenthood and nonmarital fertility are not strongly linked at the country level
- Suggests contextual, economic, and policy factors are likely more relevant for nonmarital fertility levels
- Changes in attitudes *and* changes in nonmarital fertility likely part of broader societal changes

This research was supported in part by the Center for Family and Demographic Research, Bowling Green State University, which has core funding from the Eunice Kennedy Shriver National Institute of Child Health and Human Development (R24HD050959).