

# *Policy Prescription for Preventing Unintended Pregnancies*

Brookings Social Genome Project Conference  
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# Demographic Variation in Contraceptive Use and Failure

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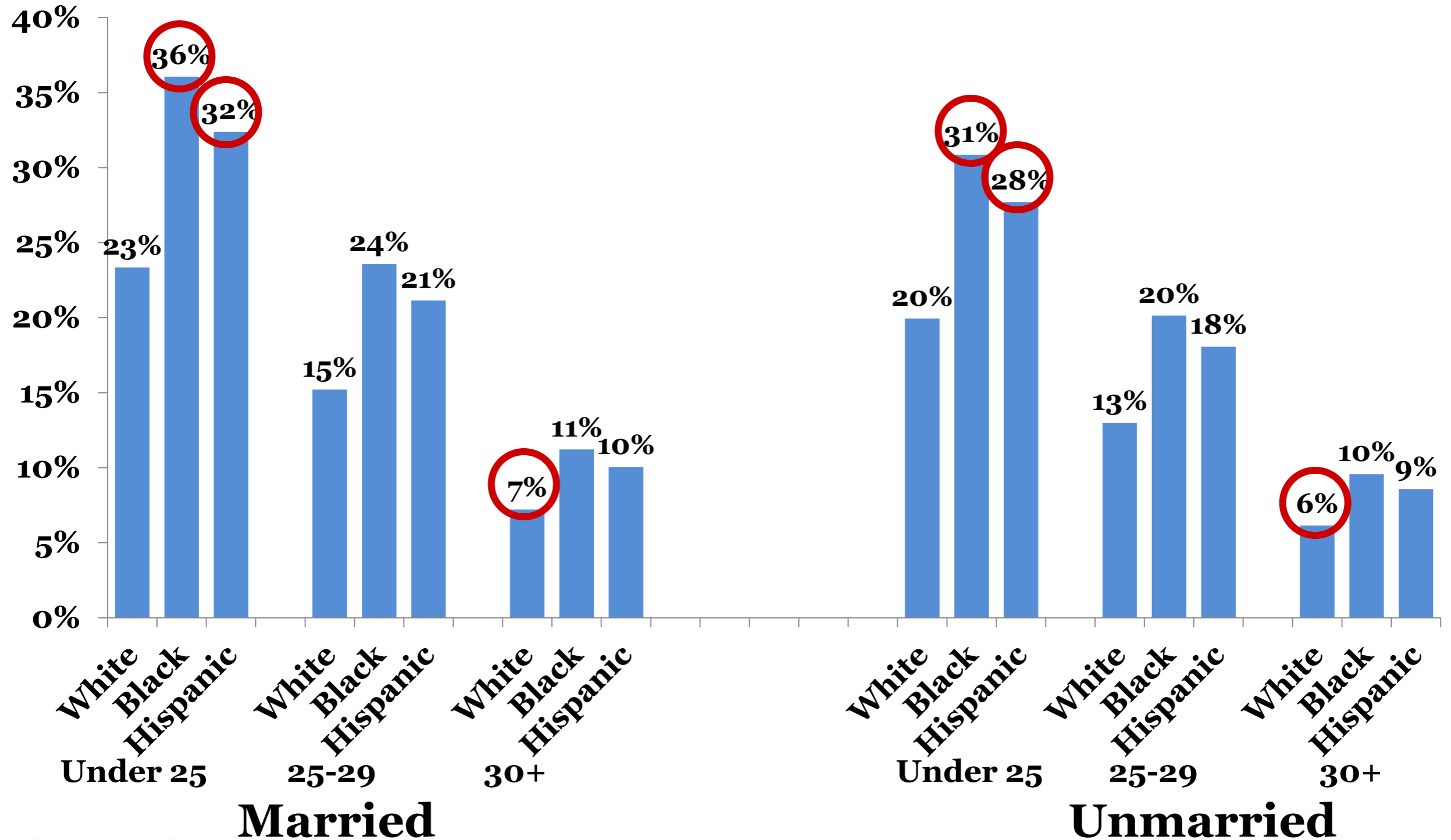
Amanda Berger, Ph.D.

Kate Welti, M.P.P.

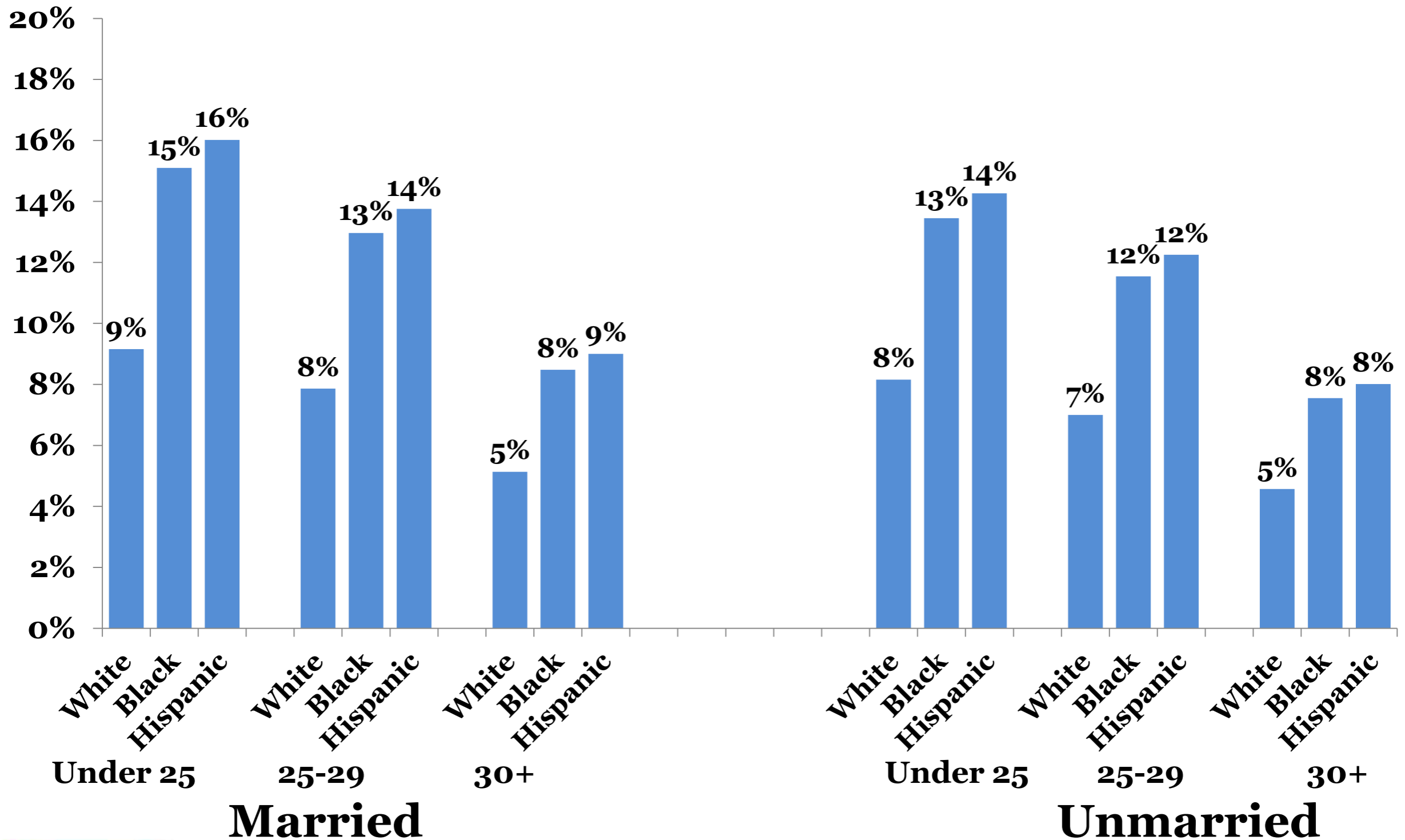
# Contraceptive Method Failure Rates

1. Socio-demographic differences in contraceptive failure rates (% pregnant in 1<sup>st</sup> year)
  - Data: 2002, 2006-08 NSFG contraceptive histories
  - Marital status, race/ethnicity, age
  - Predicted probability of pregnancy
  - Adjust average probability to “typical use” failure rates from *Contraceptive Technology* and create scalars
  - Methods: Condom, Pill, LARC
2. Examined cumulative frequencies to estimate failure rates for poor, moderate, and good users

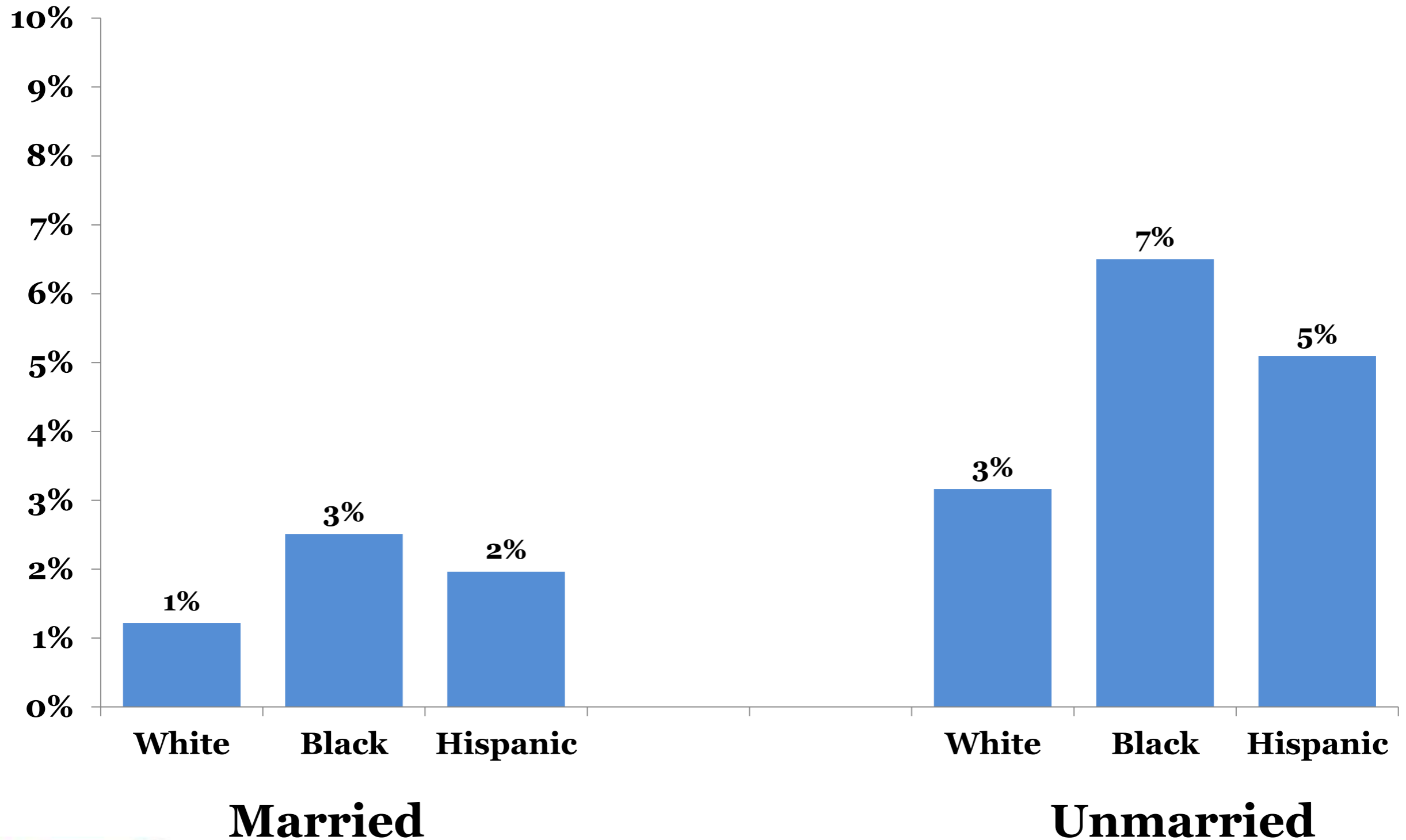
# Condom Failure Rates Vary by Subgroup



# Pill Failure Rates Vary by Subgroup



# LARC Failure Rates Vary by Subgroup



# Estimated Failure Rates for Poor, Moderate and Good Users

<b>Contraceptive Method Failure Rates</b>				
	Poor Use (Upper 25th Percentile)	Moderate Use (Median)	Good Use (Lower 25th Percentile)	Perfect Use*
Condom	19.9%	13.0%	7.2%	2.0%
Pill	8.2%	7.9%	5.1%	0.3%
LARC	3.2%	2.5%	1.2%	0.3%

\* Source: Hatch R, et al., *Contraceptive Technology 19<sup>th</sup> Revised Edition*. New York: Arden Media, Inc, 2009 p. 24.

# FamilyScape: Next Steps

- **Kris Moore & Nicole Steward-Streng (Child Trends): interesting analysis of which birth characteristics/circumstances are most predictive of success in early childhood.**
- **Will use results of this analysis to beef up the “back end” of FS and link it to the ECM.**
- **Update from Moore & Steward-Streng.**



# What Constitutes a Strong Start for Babies?

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# Purpose

- To develop a brief index of a strong start in life for a baby, using variables that are well-measured, widely available, and malleable, and that predict better child development.

# Potential Independent Variables

- Education
- Age at Birth
- Pregnancy Intentions
- Poverty Status
- Family Structure
- Relationship Happiness
- Substance Use

# Approach

- Create 3-category variables
  - Education (0=high school degree or less, 1=some college, 2=college graduate or more)
- Bivariate analyses with child outcomes
  - Behavior
  - Cognitive
  - Health Measures
- Multivariate analyses of individual variables on child outcomes
  - Analyses of varied indices on child outcomes
- Selection and creation of recommended index

# Data

Early Childhood Longitudinal Study – Birth Cohort (ECLS-B), a longitudinal study of approximately 10,700 children born in 2001. We restrict our sample to the approximately 6,200 children at 60 months whose resident biological mothers answered the nine-month parent survey and who had a valid sample weight.

- **9-month interview for “strong start” independent variables**
- **48- & 60-month variables for child development measures**

# Potential Strong Start Measures

- **Education of mother/better-educated parent**  
0=high school degree or less, 1=some college, 2=college degree or more
- **Mother's age at first birth/birth of the focal child**  
0=19 or younger, 1=20-24, 2=25 or older
- **Pregnancy intentions of both parents, mother/mother and father reports**  
0=unwanted by both parents, 1=wanted by one, 2=wanted by both parents
- **Family income**  
0=<100% FPL, 1=100-184% FPL, 2>=185% FPL
- **Welfare receipt**  
0=two or more forms of aid, 1=one form of aid, 2=no aid
- **Union status of biological parents at birth and nine months/at birth**  
0=other/no union, 1=cohabiting, 2=married
- **Relationship happiness**  
0=not too happy, 1=fairly happy, 2=very happy
- **Relationship happiness and conflict between parents**  
0=not happy and argues OR fairly happy and argues about two or more issues,  
1=else, 2=very happy and does not argue often
- **Substance use during pregnancy**  
0=a lot of smoking or drinking, 1=some of either, 2=no smoking or drinking

# ECLS-B Child Development Measures

## •Behavior

- Social Skills (parent report)
- Learning-Related Behaviors (teacher report)
- Externalizing Behaviors (parent report)
- Externalizing Behaviors (teacher report)

## •Cognitive

- IRT Reading Score (child assessment)
- IRT Math Score (child assessment)

## •Health

- Overall Health (parent report)
- BMI-Measured Weight Risk (child assessment)
- Any Hospitalization (parent report)

# Findings

- **All potential independent variables were significant and generally associated with our child outcomes**
  - Bivariate
  - Multivariate
  - Exception is intendedness in multivariate analyses
- **Some variables are stronger and more consistently related to child outcomes**
  - Age at first birth vs. age at focal birth
- **Some variables are more available in surveys**
  - Union status vs. relationship happiness
- **Some variables are better measures**
  - Parent education vs. substance use during pregnancy
- **Some variables have greater face validity**
  - Income vs. food stamps, housing, or TANF



# Therefore, we chose . . .

## Education of mother

0=high school degree or less, 1=some college, 2=college degree or more

## Mother's age at first birth

0=19 or younger, 1=20-24, 2=25 or older

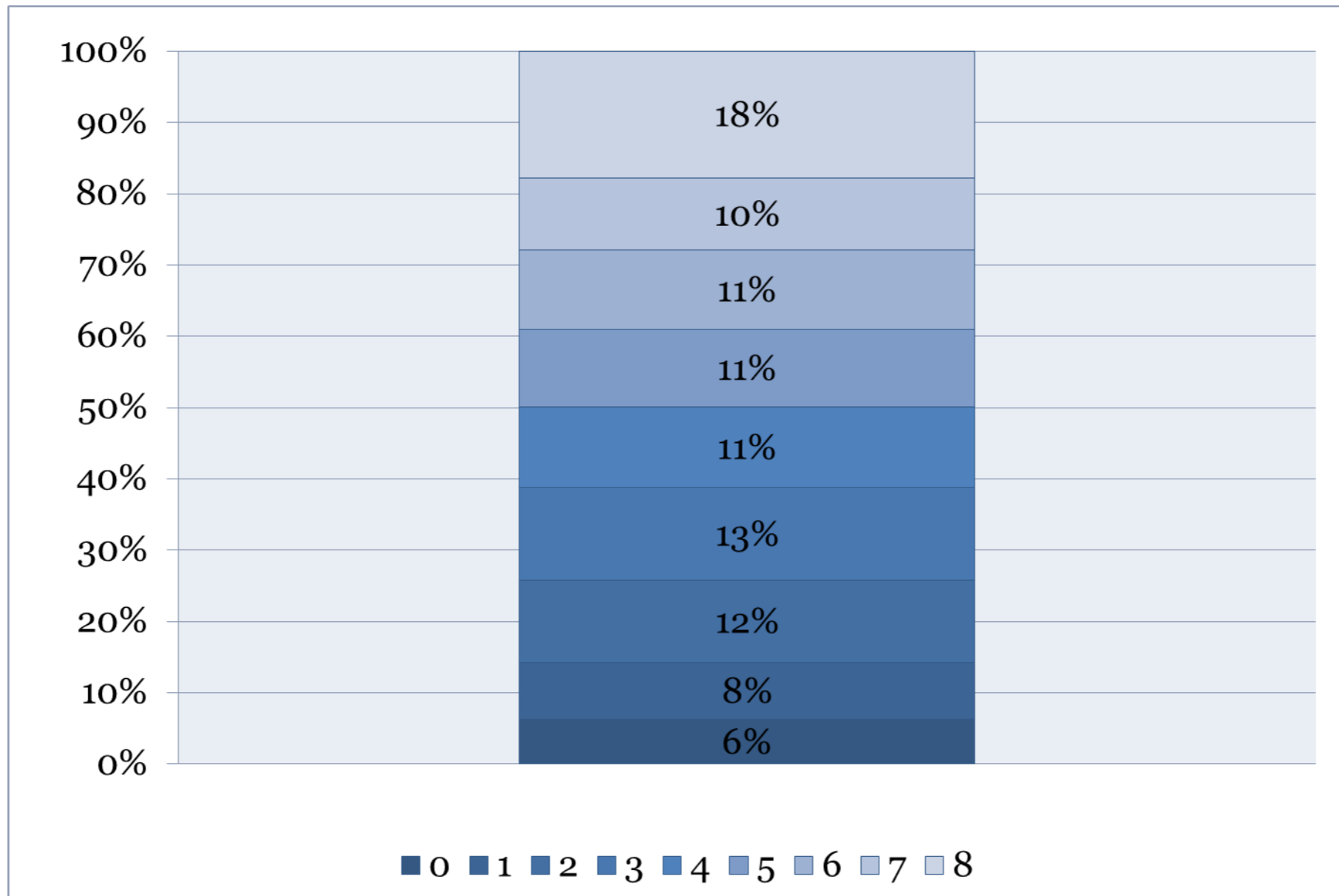
## Family income

0=less than 100% FPL, 1=100-184% FPL, 2=185% FPL or more

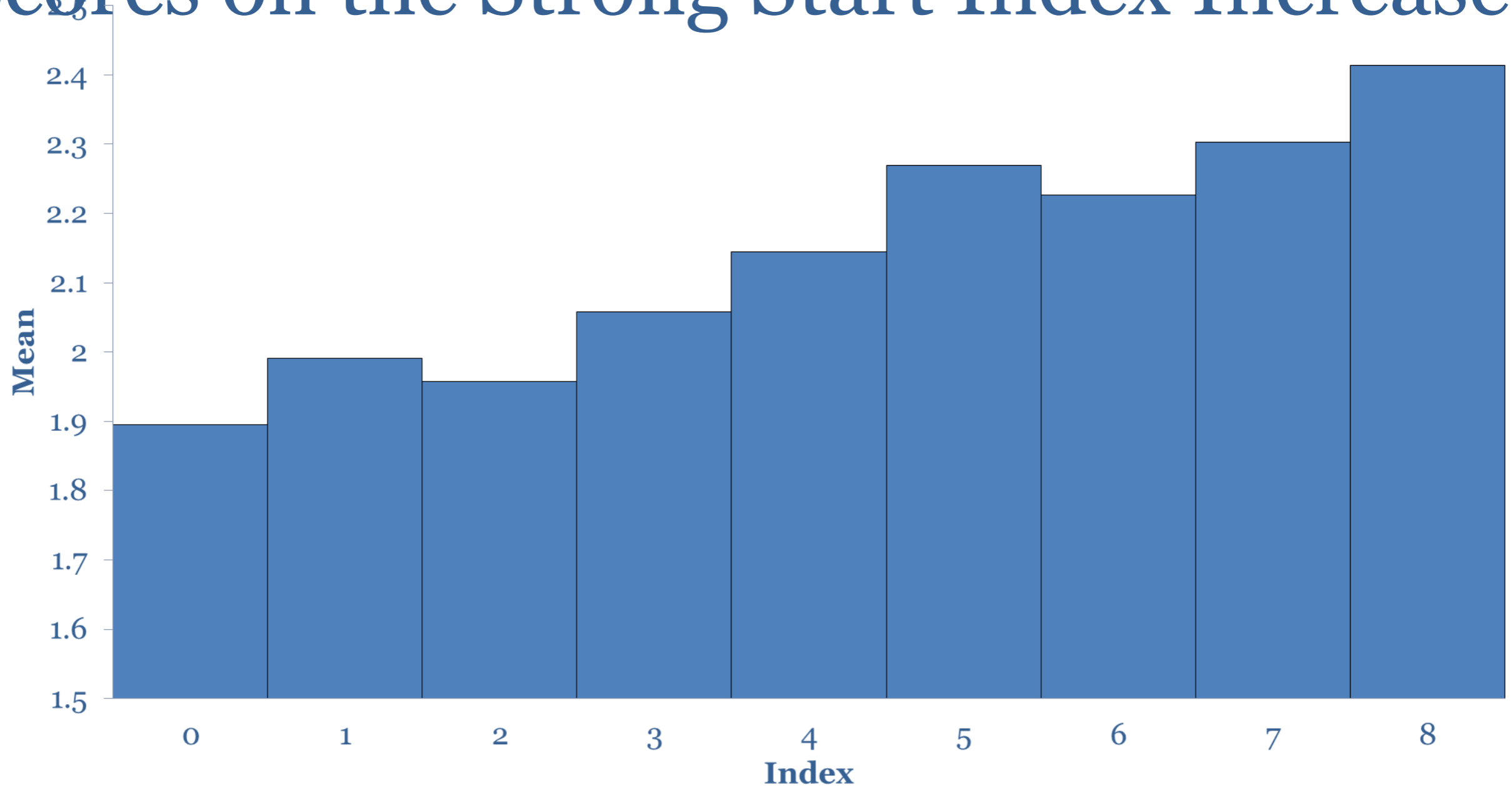
## Union status of biological parents at birth

0=other/no union, 1=cohabiting, 2=married

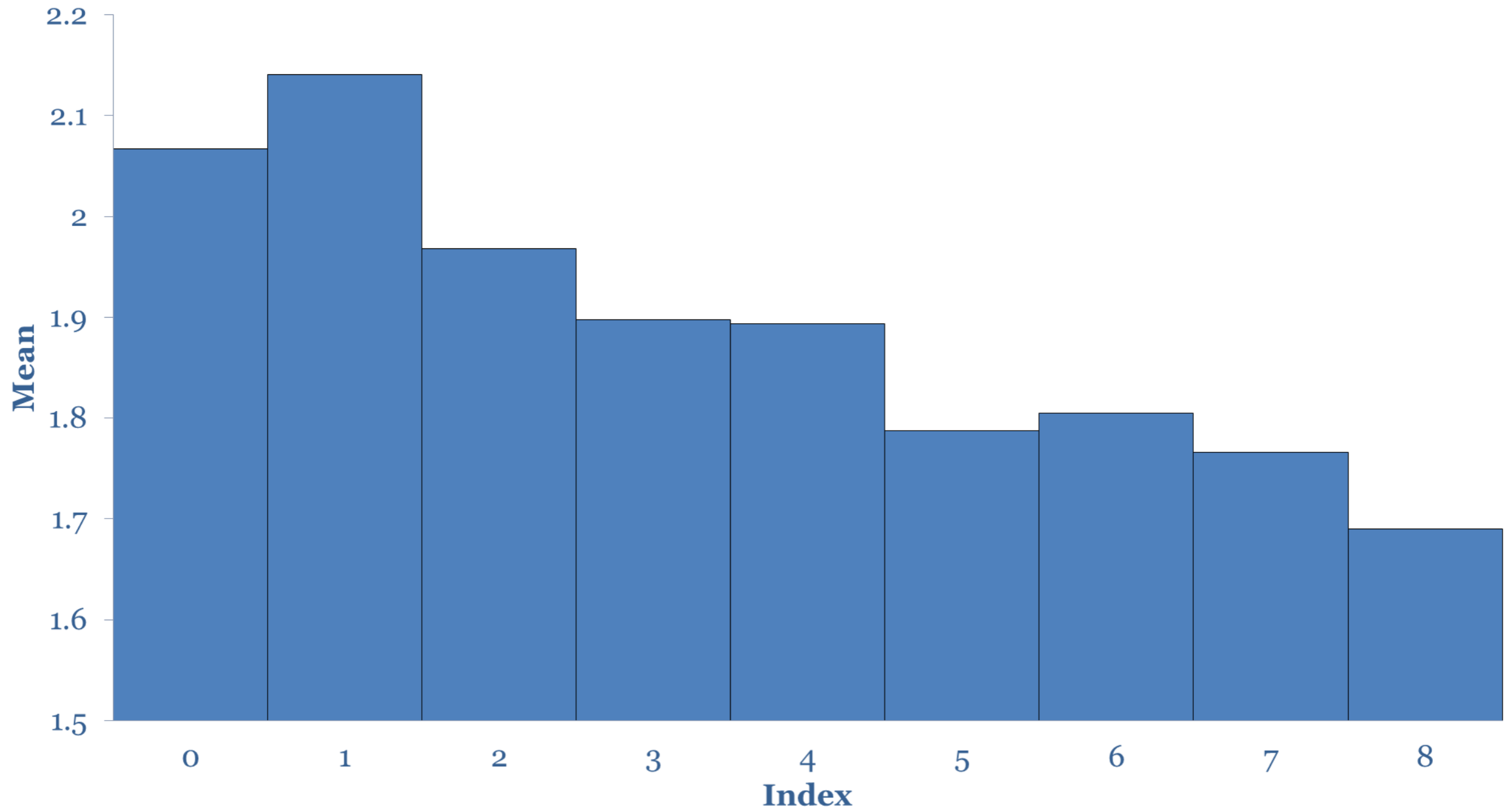
# The 8-Category Index of a Strong Start is Well-Distributed



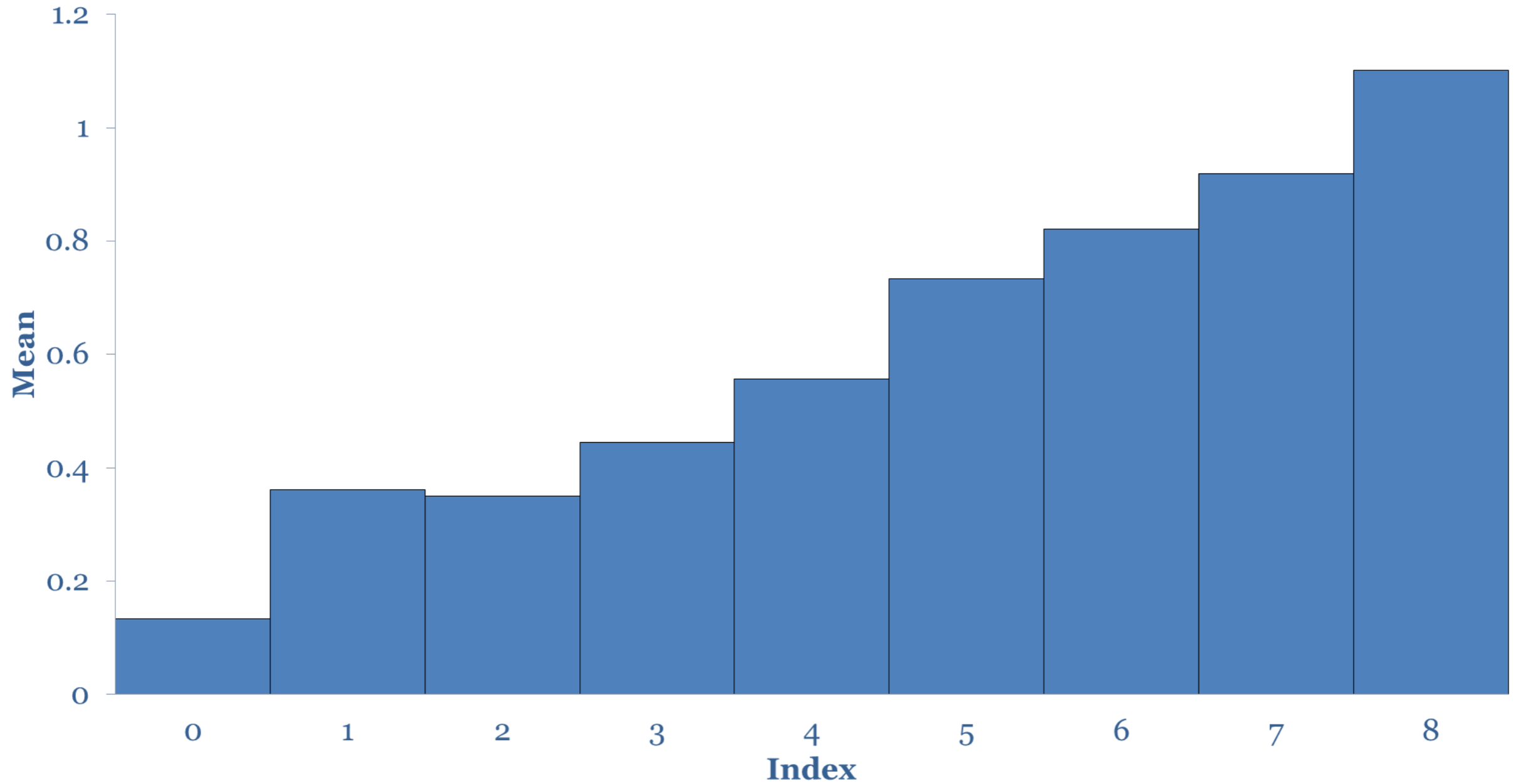
# Learning-Related Behaviors, Teacher Report (Range=-0.8 – 4.4), Improve as Scores on the Strong Start Index Increase



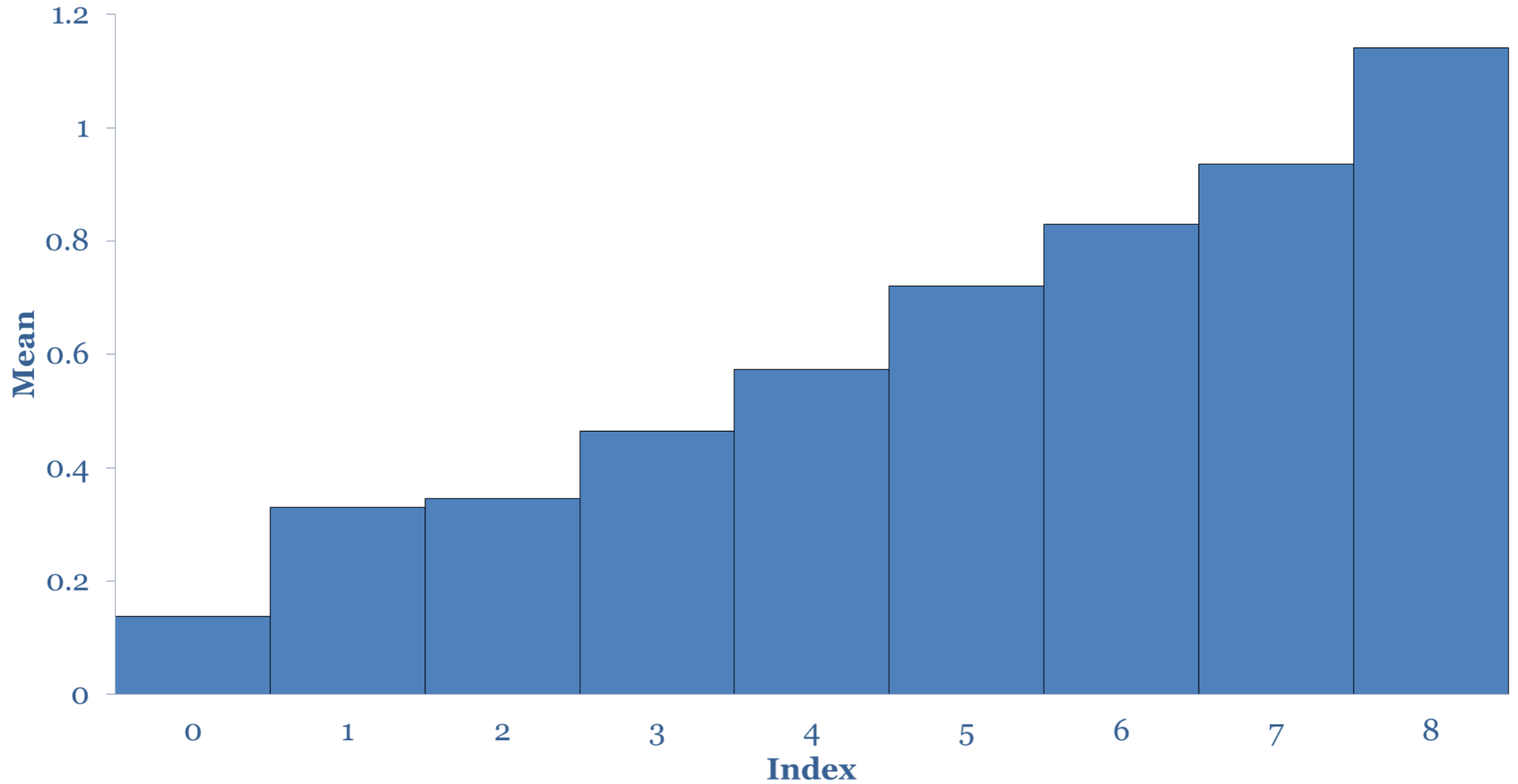
# Externalizing Behaviors, Teacher Report (Range=1– 5), Decline as Scores on the Strong Start Index Increase



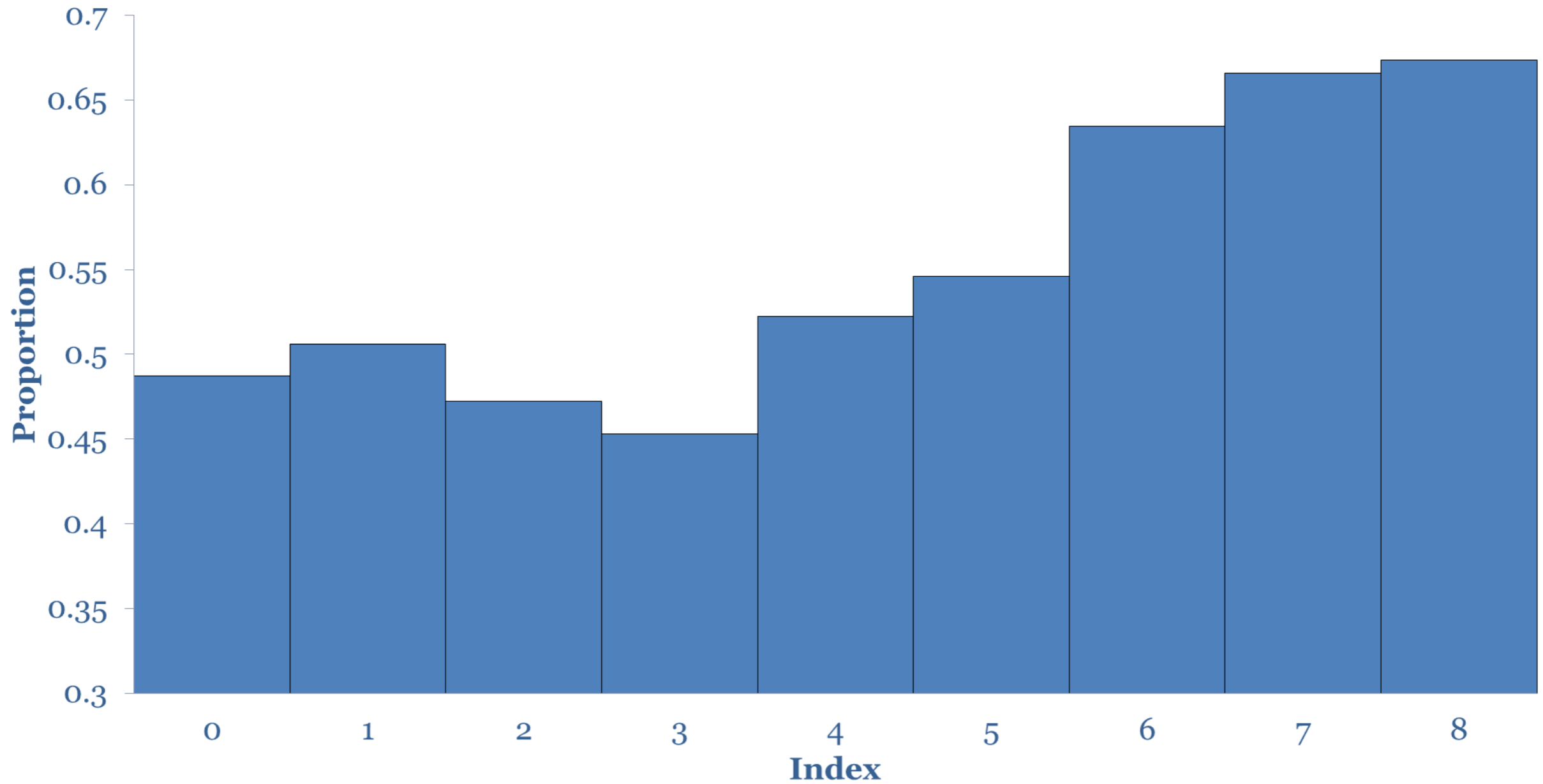
# IRT Reading Scores (Range=-1.8 – 3.1), Improve as Scores on the Strong Start Index Increase



# IRT Math Scores (Range=-1.4 – 3.1), Improve as Scores on the Strong Start Index Increase



# The Proportion of Children with Excellent Health Increases as Scores on the Strong Start Index Increase



# Implications

- **An indicator of child well-being**
- **A parameter for a microsimulation model**

## What if...

*Scores moved from 0 to 1?*

*All scores (except 8) increase by 1?*

*Scores of 0 to 3 increase by 1?*





[www.childtrends.org/WhatWorks](http://www.childtrends.org/WhatWorks)



[Twitter/childtrends](https://twitter.com/childtrends)



[www.facebook.com/childtrends](https://www.facebook.com/childtrends)



# FamilyScape: Next Steps

- **New FS tasks: well-aligned with the SGP's overarching goal of looking at life-course implications of targeted interventions carried out at different points in time.**
- **Look forward to continuing to work with CT & the SGP team to get the “3.0 version” of the model up/running new policy simulations.**

Comments/Questions Welcome...