

# Children's Education and Parents' Health in Mexico: Evidence for "Upward" Transfers of Intergenerational Resources

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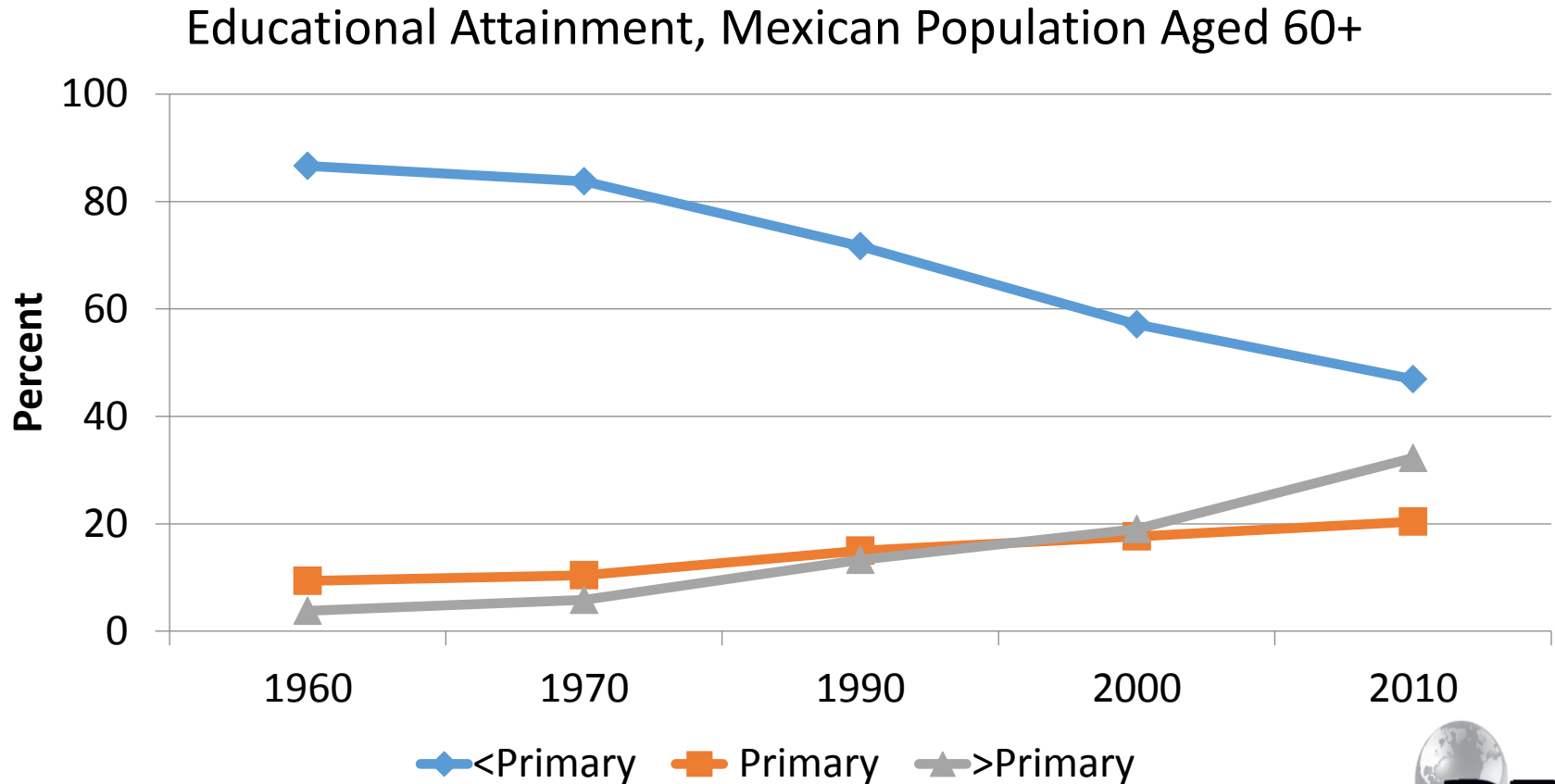
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# Motivation: aging in Mexico

- Rapidly aging population: In 2000, individuals aged 60+ made up 6% → 15% by 2027
- Challenges:
  - Institutional resources such as social security/ pensions are limited
  - Economic development through urbanization → large rural/urban disparities
  - Weakening of traditional family support systems (lower fertility, decreasing coresidence, increase in migration)

# Educational expansion: an opportunity?



Source: IPUMS, Mexican Census 1960-2010

# Increasing evidence that the associations between education and health outcomes reflect other family resources

- Recent evidence in the U.S. documents that spousal education is associated with better SRH and lower all-cause mortality (Dustin Brown's work)
- Spousal education is important for both women and men, with a slightly larger benefit for women
- Some evidence showing these types of associations for European populations although the evidence is sparse and not consistent

# Intergenerational transfers-the case of Mexico

In Mexico, older adults reliant on offspring for later-life care:

- Material resources flow<sup>↑</sup>
- Non-material resources both <sup>↑</sup><sub>↓</sub>
- Children's education: Increases monetary transfers but decreases time transfers

Demographics matter too:

- Widowed mothers receive the most.
- Daughters more likely to transfer time than sons.
- Rural families exchange more than urban families.

# Research questions

1. Does children's education affect parents' health in Mexico, beyond parents' own education?
2. Is the association stronger for mothers versus fathers? For those in rural/urban areas?
3. What is the association between sons' versus daughters' education and parents' health?

# What do we know from prior research?

- Taiwan: Parents' and children's education negatively associated with incidence of parental disability, but children's education associated with severity (Zimmer et al., 2002; 2007).
- United States: Children's and parents' education negatively associated with timing of parents' death (Friedman and Mare, 2010).
- Sweden: Education of the oldest child negatively associated with timing of parents' death (Torssander, 2013).

# Data

## Mexican Health and Aging Study (MHAS)

- Modeled after U.S. Health and Retirement Study (HRS)
- Longitudinal survey of adults aged 50 and over in Mexico
- Three waves of data collected (2001, 2003, 2012)
- Demographic information collected on each of the respondent's living children (resident and non-resident)
- All 32 states, both rural and urban areas



# Analytic sample

- 2001 data only
- Parents with children all aged 25+ (52% of HHs)
- Exclude any respondents who with missing data on functional limitations
- N= 5,765 parents

# Outcome measures

## Parents' health

- Presence and number of functional limitations
- Respondent indicated having difficulty because of a health problem with the following items:
  - 1) stooping, kneeling or crouching
  - 2) climbing one flight of stairs
  - 3) walking across the room
  - 4) picking up a coin
  - 5) extending arms (reaching)

# Explanatory measures

- Parents' education
  - <6 years
  - 6 years (primary education)
  - >6 years
- Children's education
  - Proportion of children with 13+ years of schooling (some post-secondary education or more):
    - No children 13+
    - Some children 13+
    - All children 13+

# Controls

## Parents:

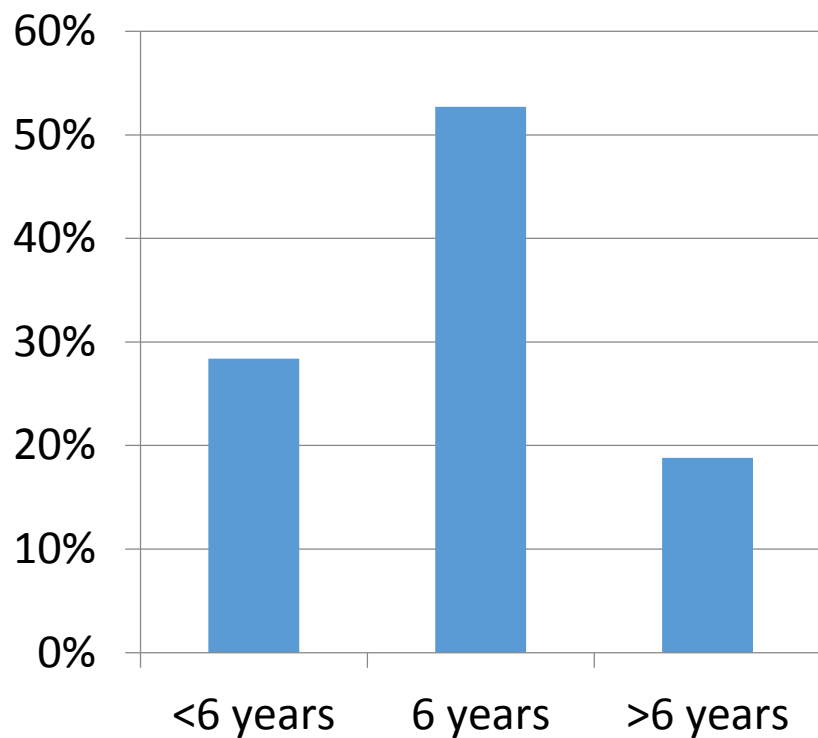
- Gender, age, marital status, number of children, migration history, urban/rural status, income (including transfers from children), wealth

## Children:

- Gender composition of children, Geographic proximity of closest child, average financial status of children

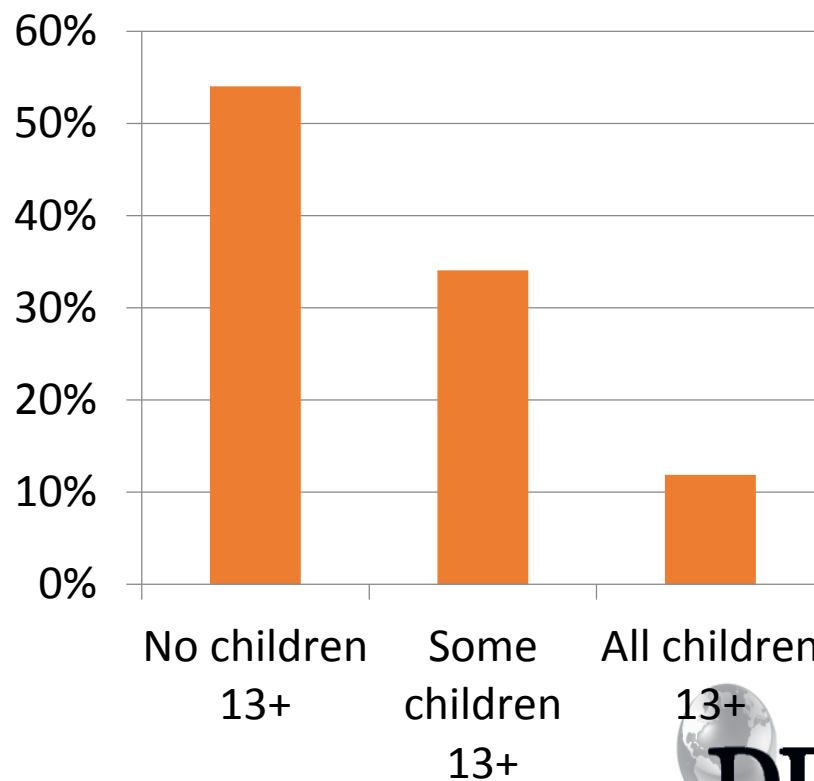
# Sample educational distribution

## Parent's Education

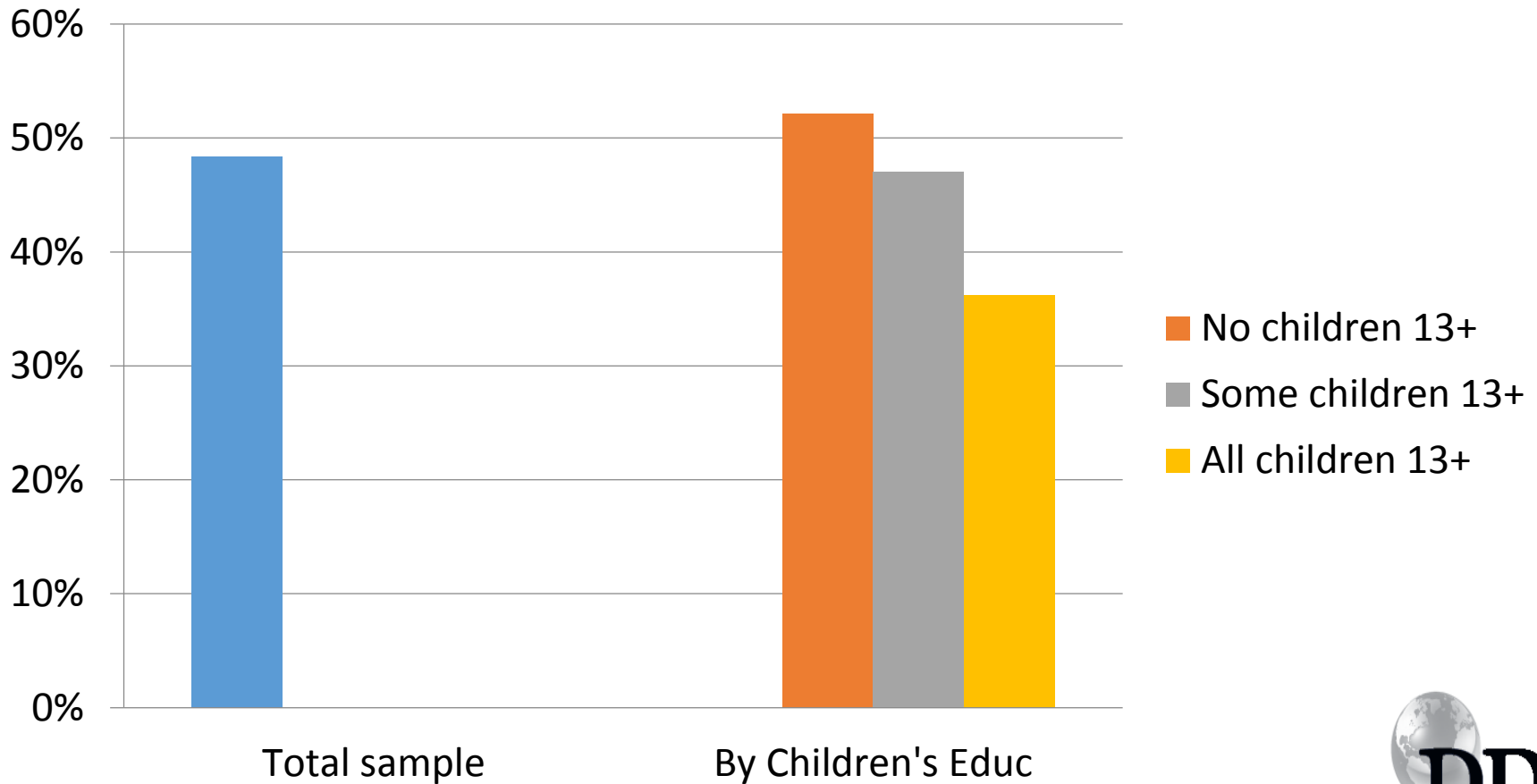


Source: MHAS, 2001

## Children's Education

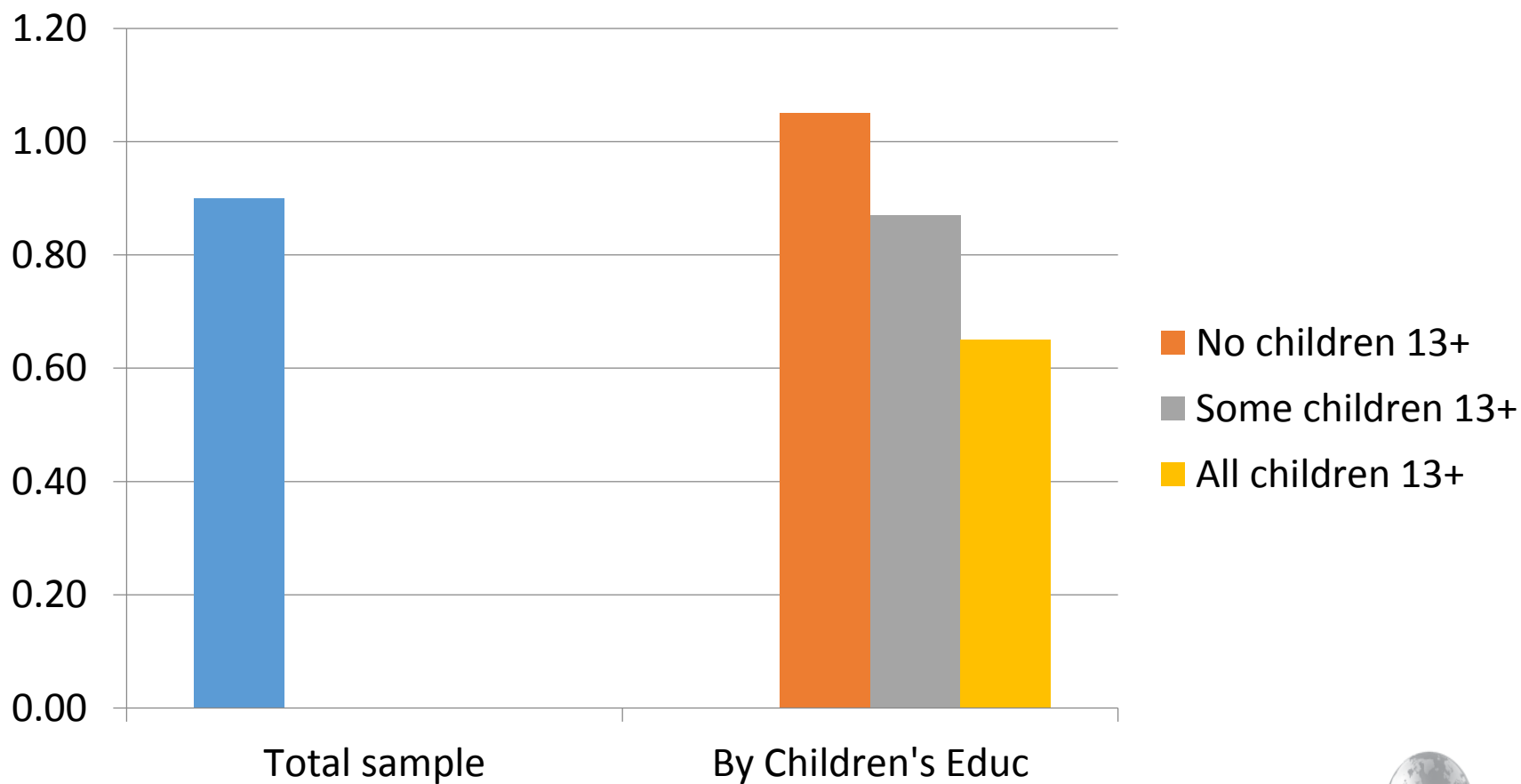


# Presence of any functional limitations?



Source: MHAS, 2001

# Number of functional limitations



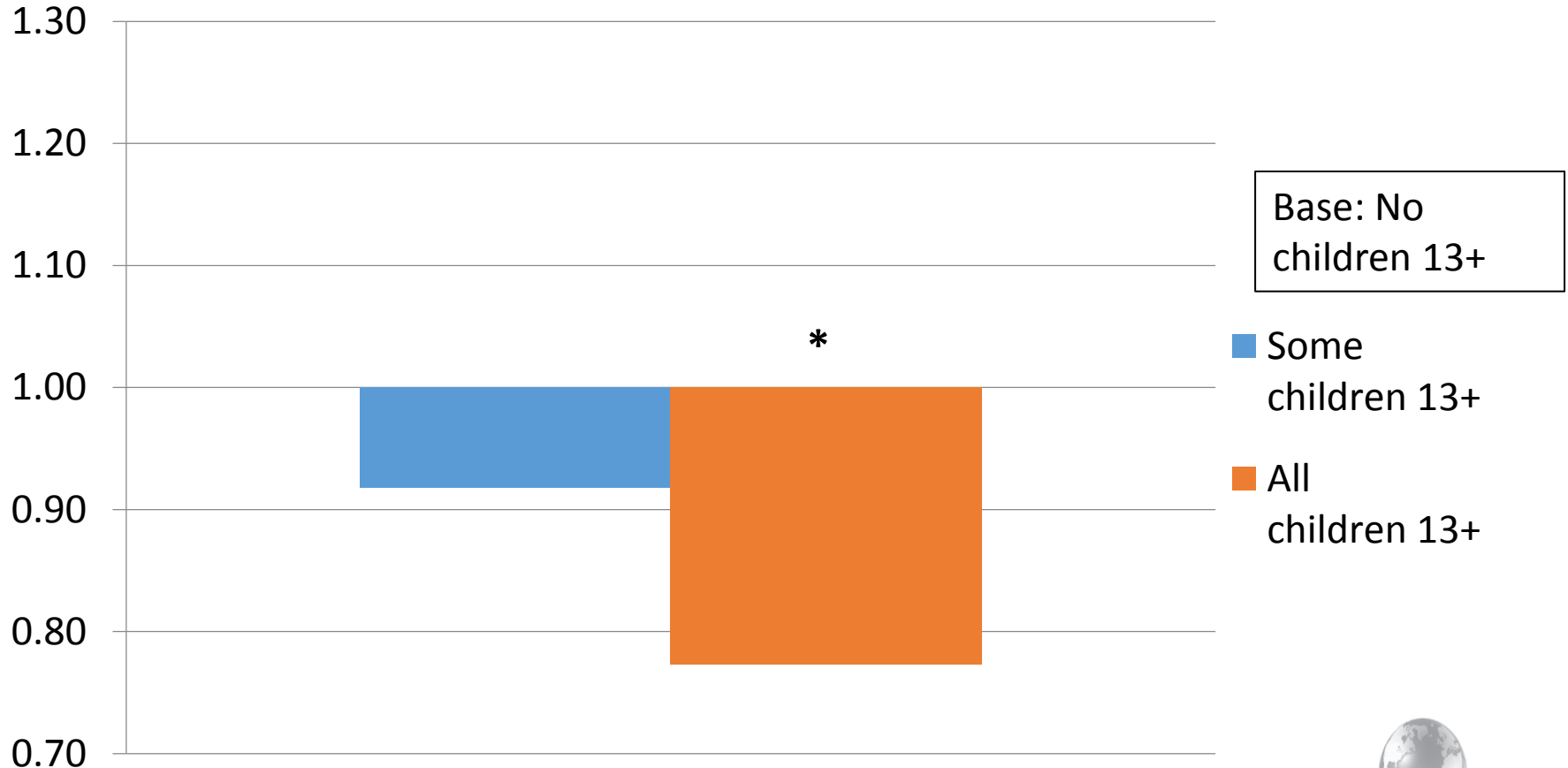
Source: MHAS, 2001

# Analysis

- Logistic regression predicting presence of functional limitations controlling for R's education plus controls.
- Negative binomial regression predicting number of functional limitations controlling for R's education plus controls.



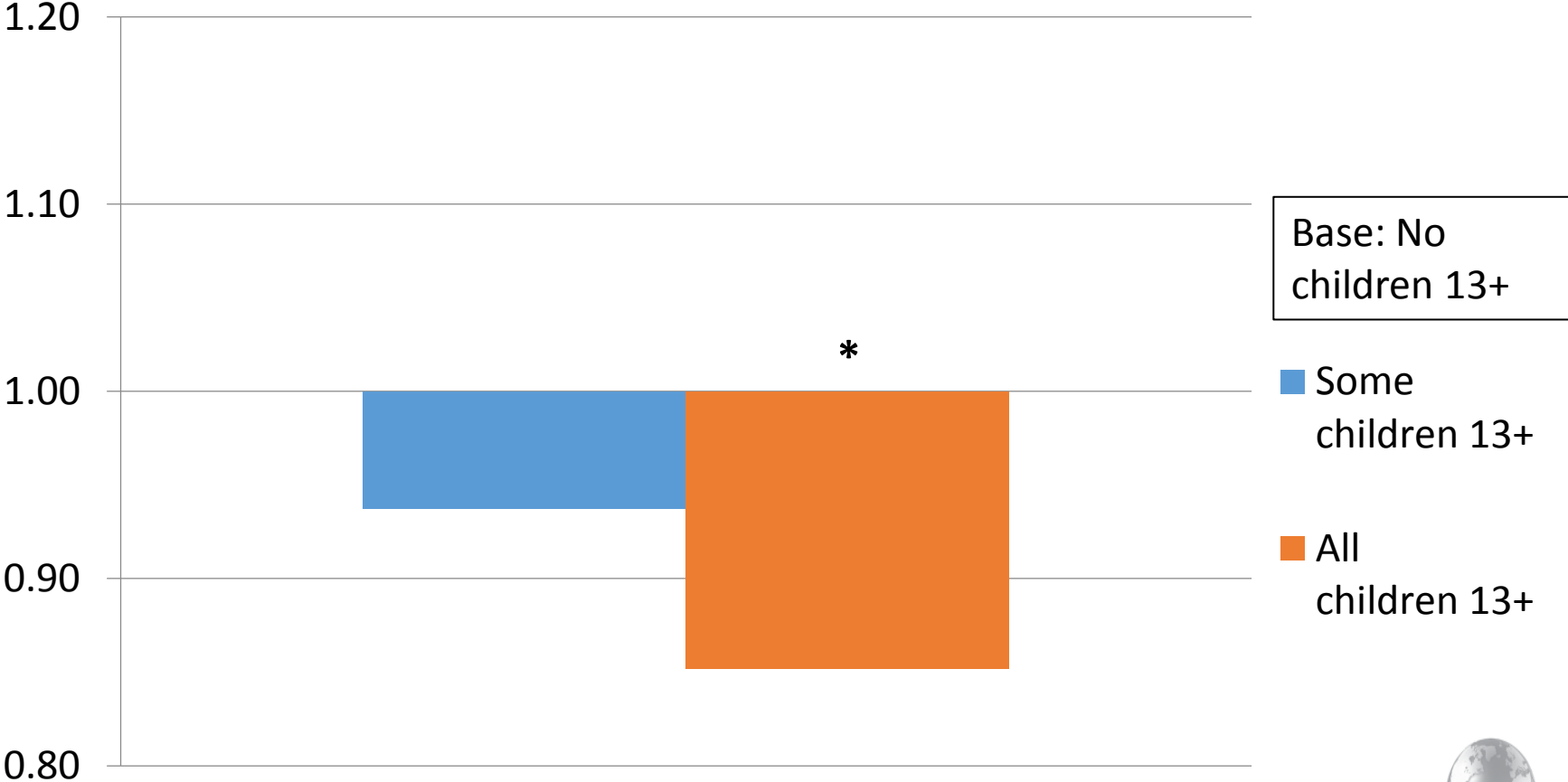
# Odds ratios of parents' functional limitations by children's education



Note: Model controls for R's Education and R and Children's Traits, \* $p < .05$

Source: MHAS, 2001

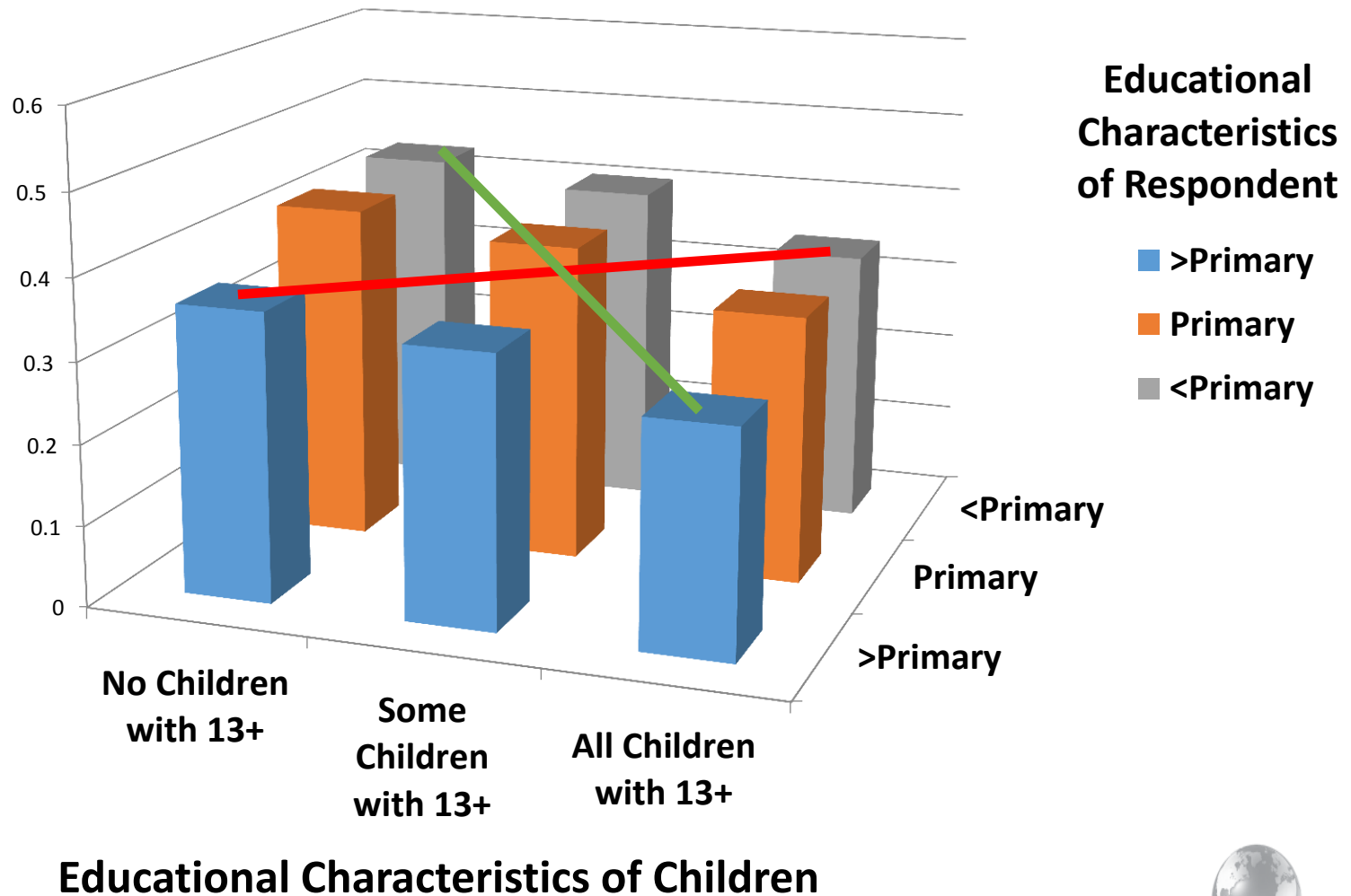
# Rate ratios of parents' functional limitations by children's education



Note: Model controls for R's Education and R and Children's Traits, \*p<.05  
Source: MHAS, 2001



# Probability of One or More Functional Limitations, Fathers



# Results summary

- Parents with children who all completed some post-secondary education are less likely than parents with children who completed no post-secondary education to report any functional limitations.
- The number of problems they report are also fewer.
- The gender of parents/children played a minimal role
- Moderators?
  - rural/urban differences?
  - Children's proximity?
  - Migration?

# Implications and next steps

- Parents' health is benefited when their children achieve a high level of education during a period of educational expansion
- Education under these conditions is clearly a family resource and not simply an individual resource
- Older less educated adults with poorly educated children are a highly vulnerable population group
- Next steps:
  - Longitudinal analyses to assess health trajectories and mortality of parents
  - Extension to race/ethnic groups in the United States

# Acknowledgements

Thank you!

Questions? Please email: [jyahirun@prc.utexas.edu](mailto:jyahirun@prc.utexas.edu)

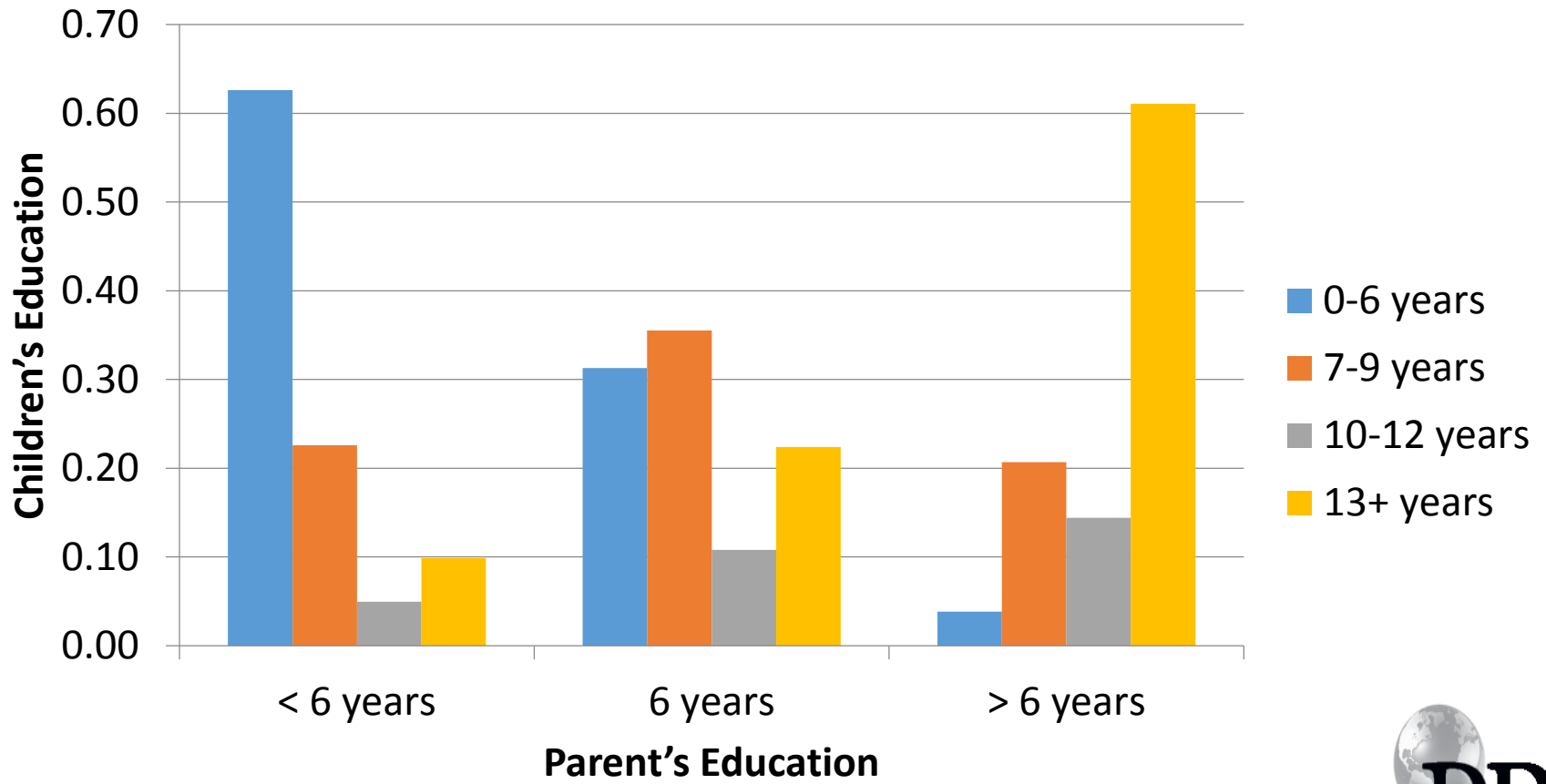
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# Extra slides

- [Parent's by Children's Education Matrix](#)
- [Sample Traits](#)
- [Descriptive: Any Functional Limitations by R's Education](#)
- [Descriptive: Number of Functional Limitations by R's Education](#)

# Parent's by Children's Education





# Sample Traits

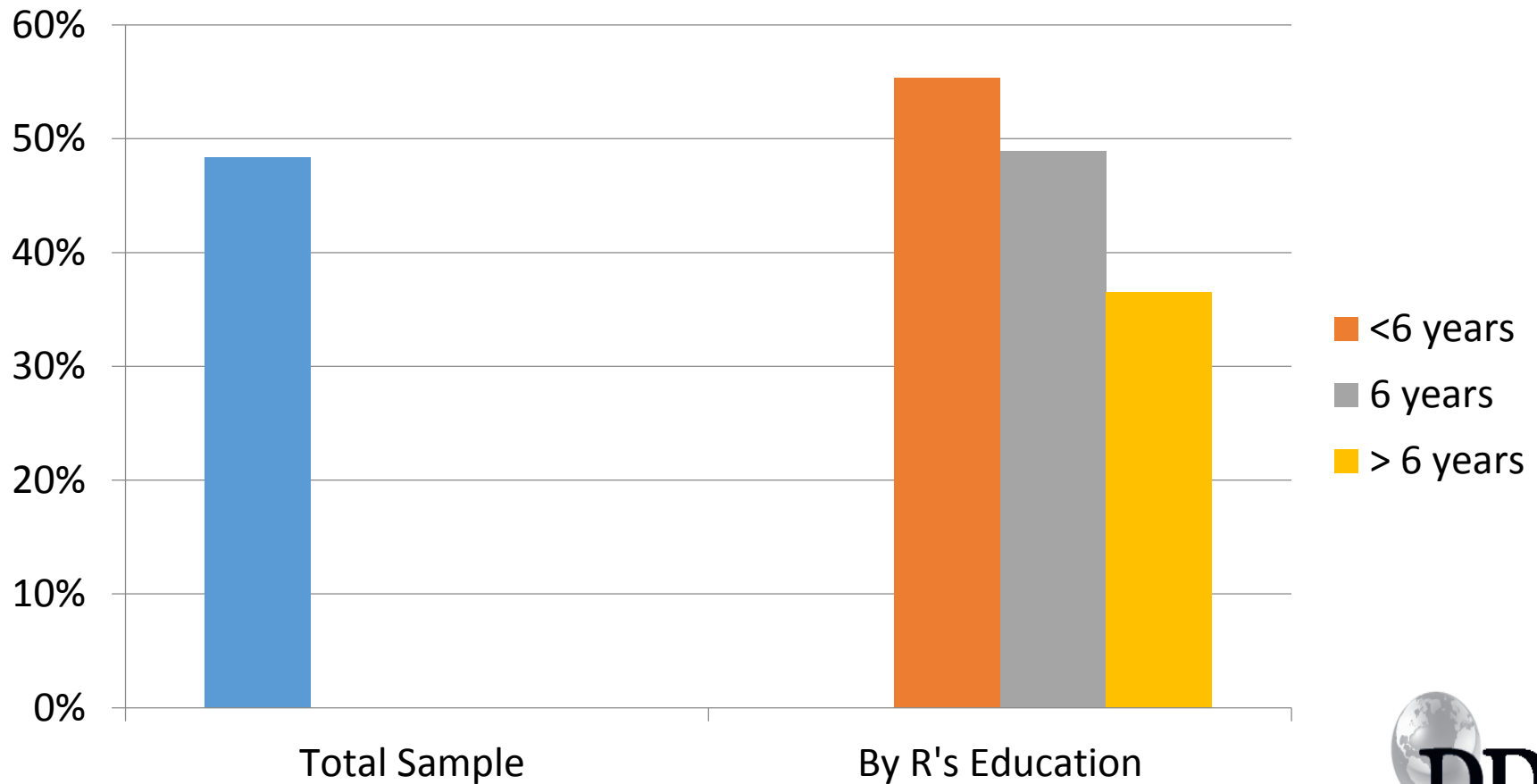
## Respondents

- 39% male
- 67 years old
- 58% married
- ~6 children
- 69% urban

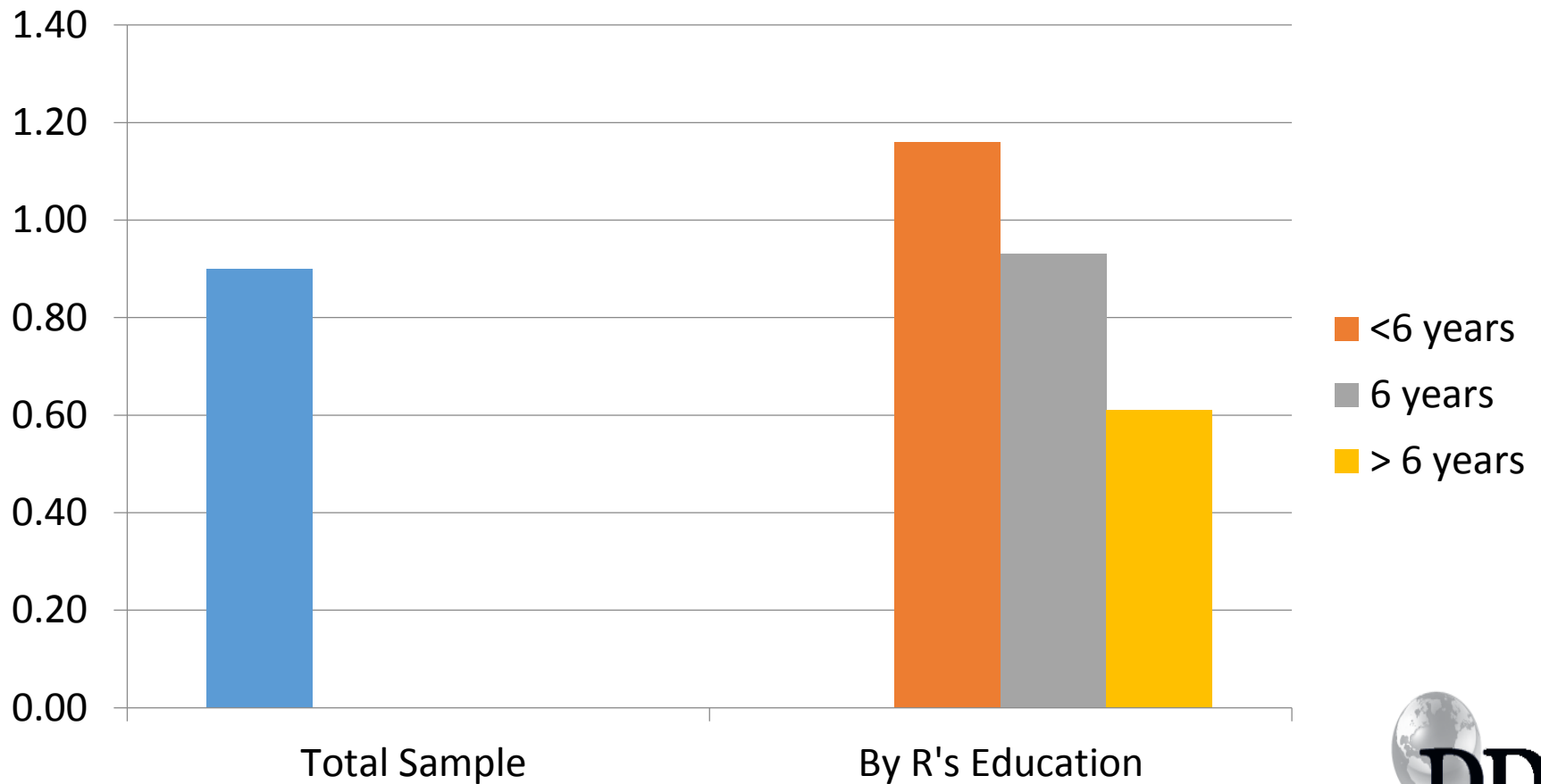
## Children

- 81% sons and daughters
- 56% 1+ coresident child
- 90% fair/good financial status

# Any Functional Limitations by R's Education

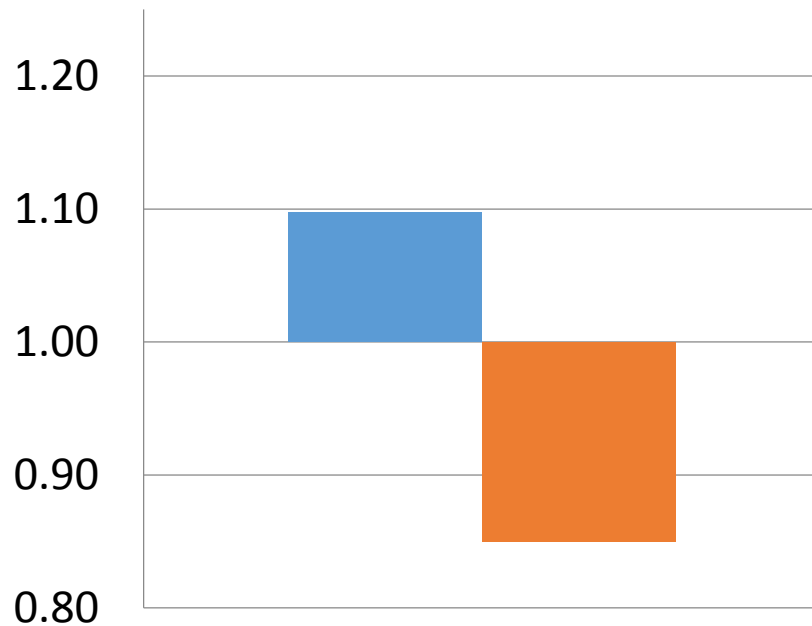


# Number of Functional Limitations by R's Education



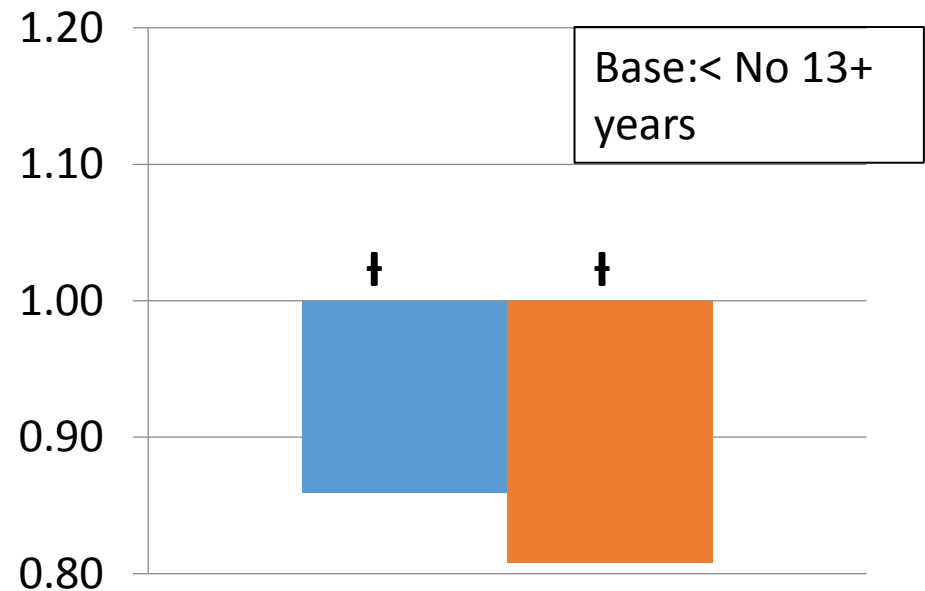
# Odds ratios of any limitations by sons vs. daughters education

## Sons' Education



■ Some 13+ ■ All 13+

## Daughters' Education



■ Some 13+ ■ All 13+

Note: Model controls for R's Education and R and Children's Traits, † p<.10

Source: MHAS, 2001

