

Respondent Driven Sampling for Immigrant Populations: An Application to Foreign-Born Korean Americans*

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Jerzy Neyman

Background – 1

- Pressing needs for minority data collection
 - Changes in the racial/ethnic composition of the U.S. population
 - Expansion in the scope of policy agenda and research interests
 - Negative outcomes for minorities
 - Evidence for data on more granular racial/ethnic categories (e.g., Asian Americans vs. Korean Americans)
- No practical solutions for sampling
- Respondent driven sampling (RDS)
 - Variant of snowball sampling exploiting social networks
 - Chain-referral: *seeds* to their peers through incentivized recruitment using coupons
 - Potentially useful locating rare groups

Background – 2

- RDS for racial/ethnic minorities
 - Built-in social networks
 - Racial homophily
 - Applications limited mostly to the context of in-person surveys of migrants in Europe
 - Uncertain representation properties

This study

A Web-based RDS survey specifically designed to

- Evaluate its application for racial/ethnic minorities and
- Compare RDS sample against external data from two well-established probability sample surveys with respect to
 - geographic distributions and
 - population estimates

Data – 1

Health and Life Study of Koreans (HLSK)

- Targets foreign-born Korean American adults in
 - Los Angeles County
 - State of Michigan
- Web-RDS survey
 - <http://sites.lsa.umich.edu/korean-healthlife-study/>
 - Unique number required for participation
 - Incentive through checks (\$20 for survey; \$5 per recruit)
 - June 2016 to March 2018
 - LA n=354 (from 128 seeds)
 - MI n=278 (from 93 seeds)

Data – 2

External data

- American Community Survey (ACS) 2012-2016
 - Flagship population data using area-probability sampling
 - Foreign-born Korean adults: LA n=7,983; MI n=789
 - Public Use Micro Sample (PUMS) and Summary File (SF)
- California Health Interview Survey (CHIS) 2013-2016
 - LA only
 - RDD telephone survey
 - Foreign-born Korean adults: LA n=407
 - *AskCHIS* (online query system) and sample counts through personal communication

Analysis

1. Geographic distributions

- MI by county (HLSK sample, ACS pop)
- LA by ZIPCODE (HLSK sample, ACS pop, CHIS sample)

2. Population estimates

A. ACS and HLSK

- MI and LA
- Socio-demographics
- Health: Insurance coverage, Disability

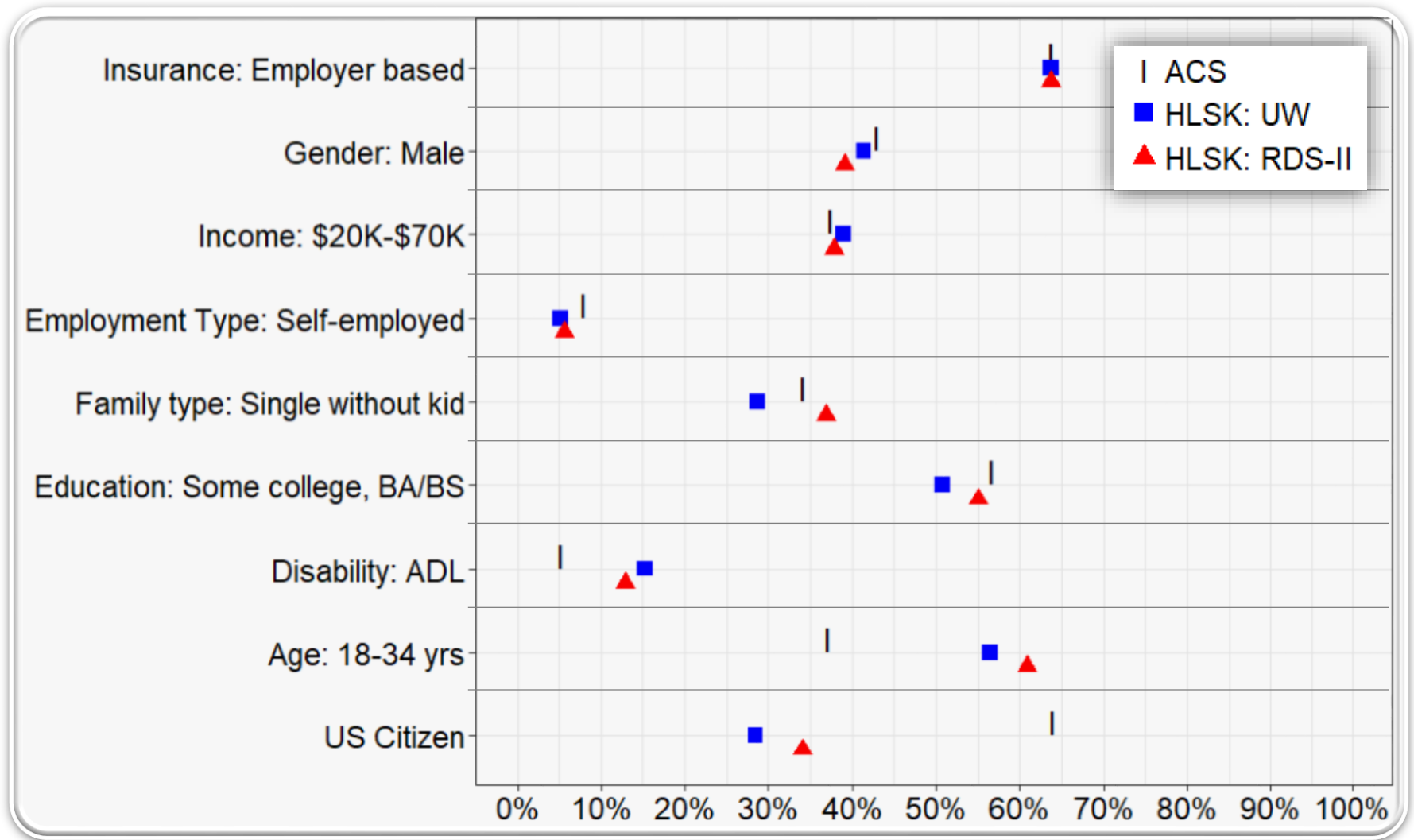
B. CHIS and HLSK

- LA only
- Socio-demographics
- Health: Insurance coverage, Disability + lots more

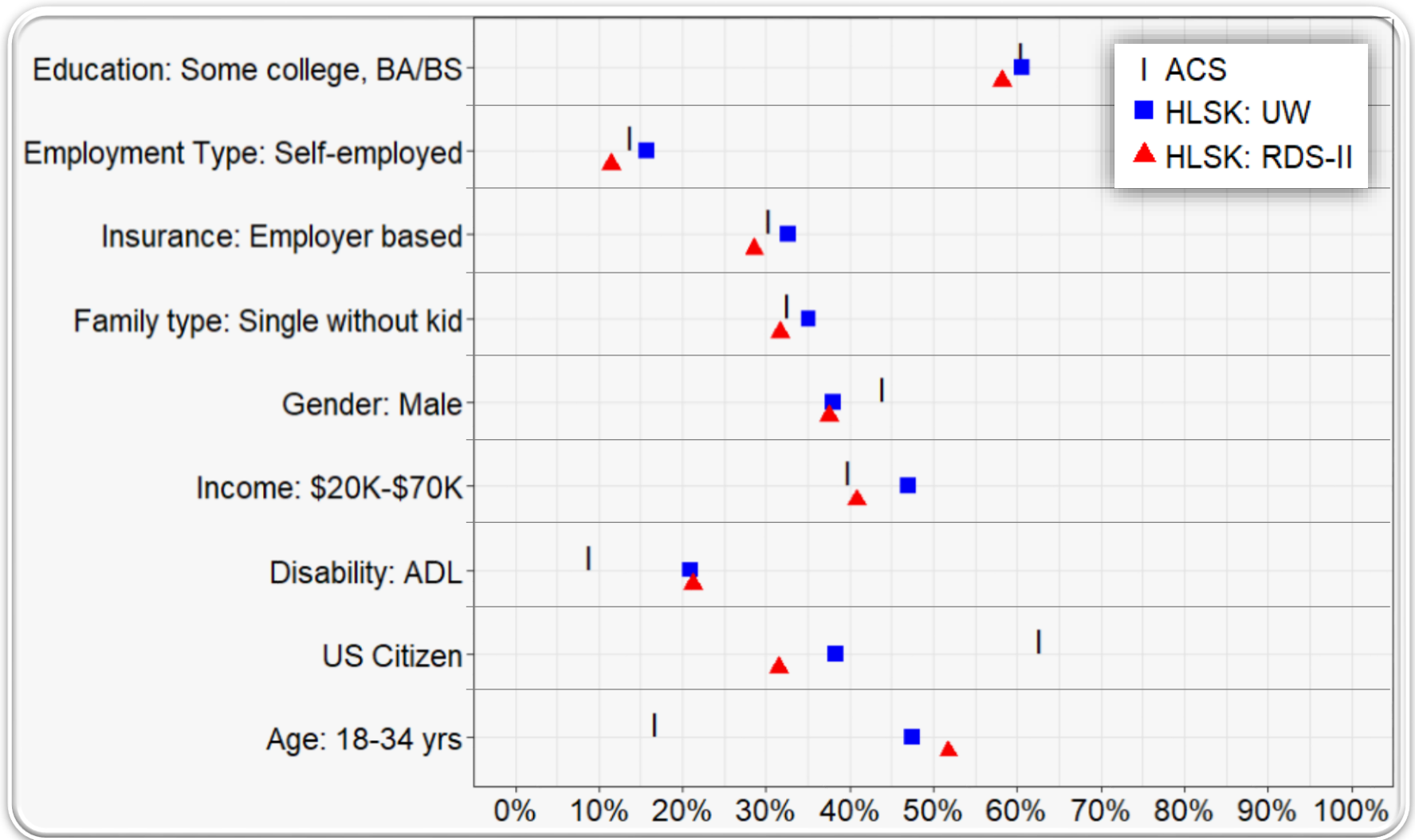
Results – Geographic distribution

- [MI Maps](#)
- [LA Maps](#)

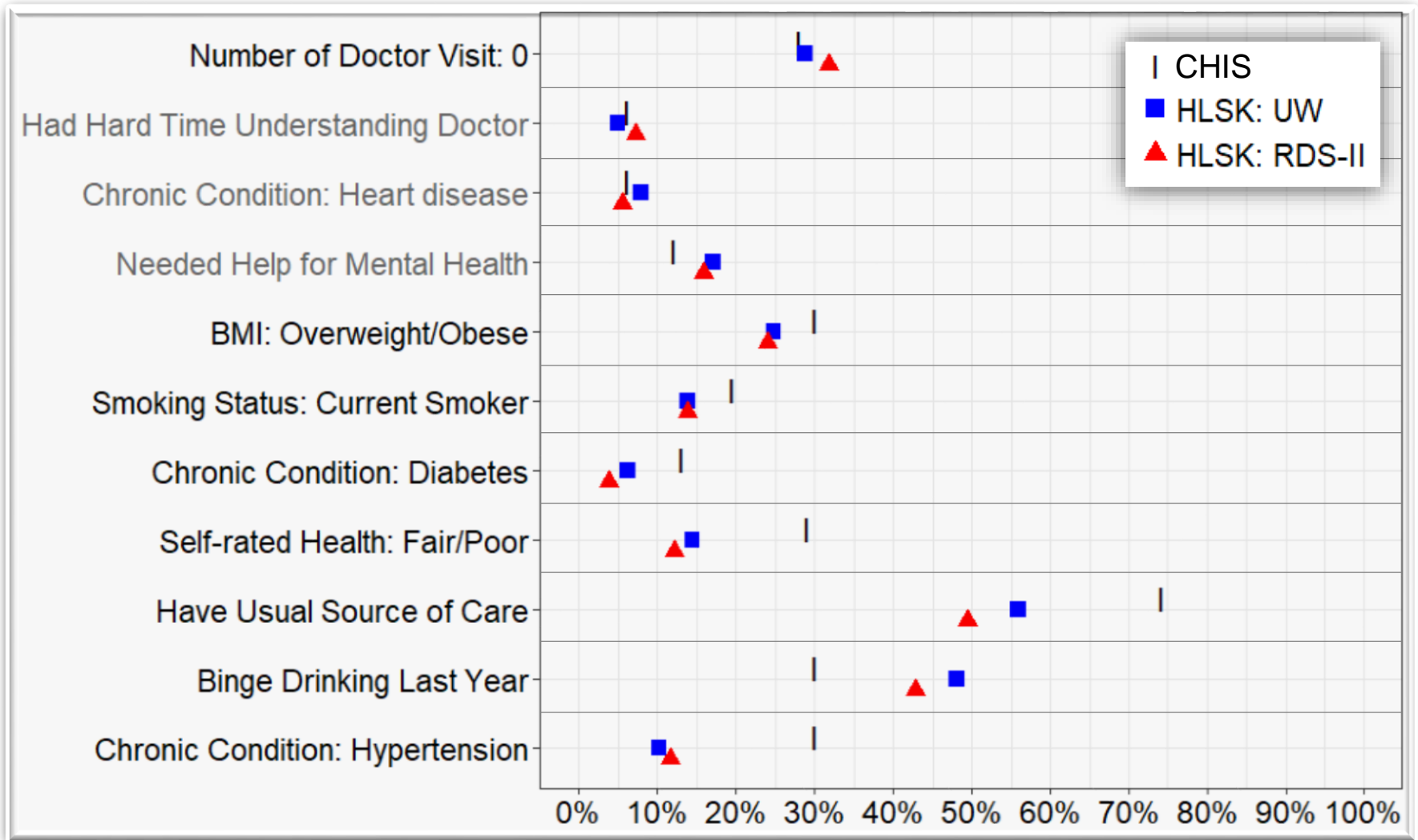
Results – MI: ACS and HLSK



Results – LA: ACS and HLSK



Results – LA: CHIS and HLSK



Implications

- Geographic coverage promising
- Population estimates
 - HLSK fared well on family type, household size, employment type, and health insurance coverage and type
 - HLSK over-represented younger, more recent immigrants (hence, lower English proficiency and U.S. citizenship)
 - Unclear health outcome patterns
- Consistent patterns between MI and LA
- Over-representation of recent immigrants
 - Effectiveness for harder-to-recruit minority subgroups?
- Existing RDS-specific estimation methods ineffective
- Operational difficulties ← Recruitment noncooperation

THANK YOU!

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