Social stratification, health belief and health-prevention screenings among older adults in China

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Disclosure

- Co-authors
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  - Bei Wu, PhD, Duke University School of Nursing
- Learner objectives:
  - Better understanding of barriers to health-prevention screenings among Chinese older adults.
  - Better knowledge on designing culturally appropriate interventions to promote preventive care practices

Outline

- Introduction
- Methods
- Findings
- Conclusion

Introduction

- Increasing older adults population in China
- Preventive care:
  - Crucial for secondary and tertiary prevention of diseases
  - Low awareness in China
- Healthy People 2020 also recommends regular health-prevention screenings

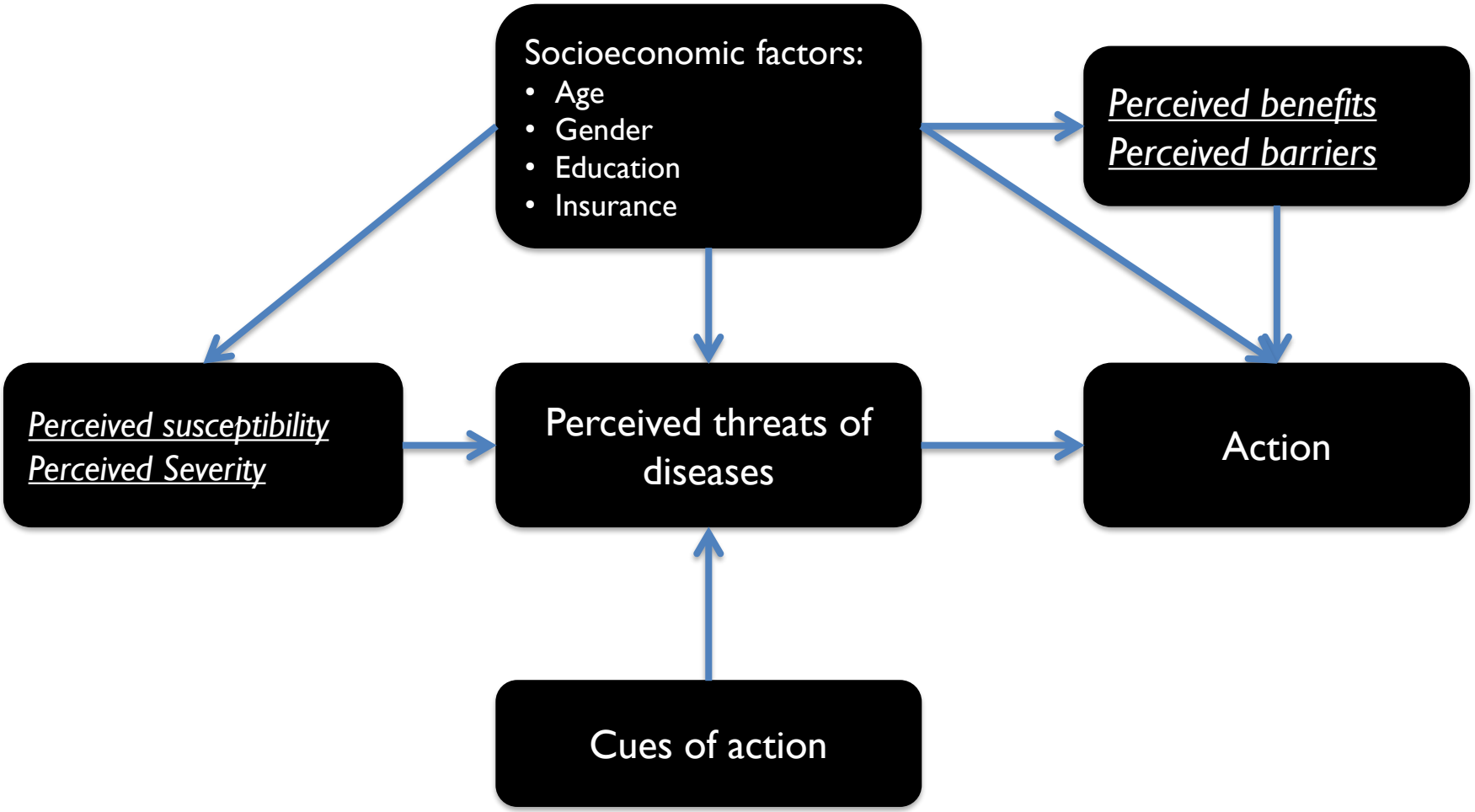
Introduction (cont'd)

- Well established relationship between social stratification and health care utilization
- Health belief may influence performance of health-prevention screenings
- Little is know about how social stratification, health belief, and health-prevention screenings are related

Specific Aims

- To explore direct and indirect relationships between social stratification and health-prevention screenings,
- To test the mediating effect of heath belief on the relationship between social stratification and health-prevention screenings.

Health Belief Model (HBM)



Methods

- The study used data from 2013 Survey of the Shanghai Elderly Life and Opinion (SELO).

Source of SELO

- Cross-sectional study
- 10 districts in Shanghai (5 urban, 5 suburban and rural)
- 3418 individuals aged 60+

Health-prevention Screenings

- Categories:
  - Complete blood count(CBC)
  - Urinalysis
  - Stool analysis
- Variables:
  - Summary score
  - Three binary variables

Modified Attitudinal Index (AI)

- Measures Chinese older adults' health belief about health-prevention screenings
- Originally tested in Singapore
- 4 dimensions (16 items):
  - Barriers
  - Fatalism
  - Detects
  - Necessity
- Range: 16-64, higher score indicates more negative health belief

Social stratification

- Education
- Financial status: (5 point Likert scale: 1=very poor, 5=very good)
- Location: urban/rural
- Medical Insurance (Yes/No):
  - Rural Cooperative Medical Insurance
  - Urban Resident Medical Insurance
  - Urban Employee Medical Insurance
  - Government Medical Insurance

Covariates

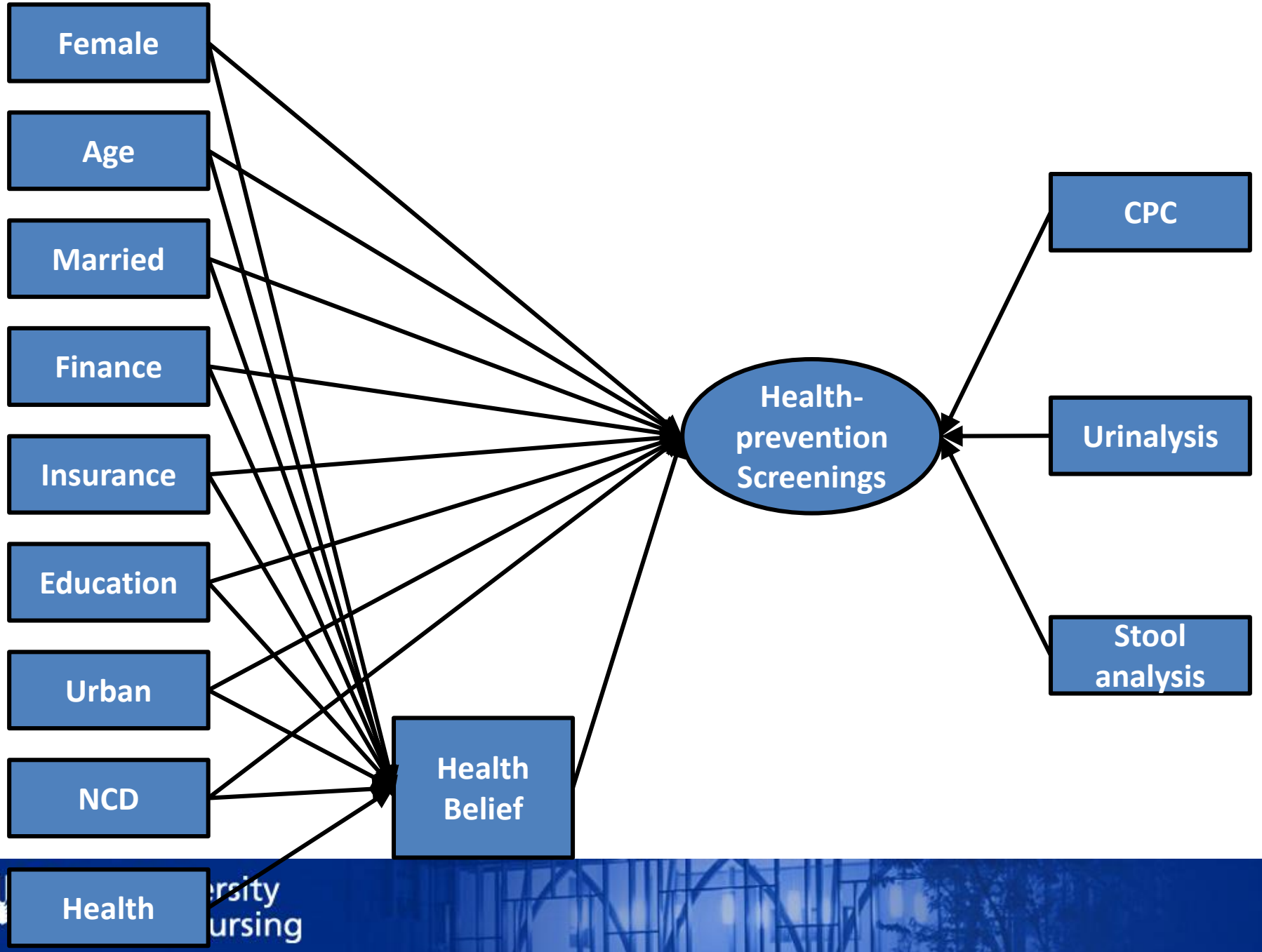
- Gender
- Age
- Marital status
- Self-rated health status: (5 point Likert scale: 1=very poor, 5=very good)
- Number of chronic conditions: 0-6

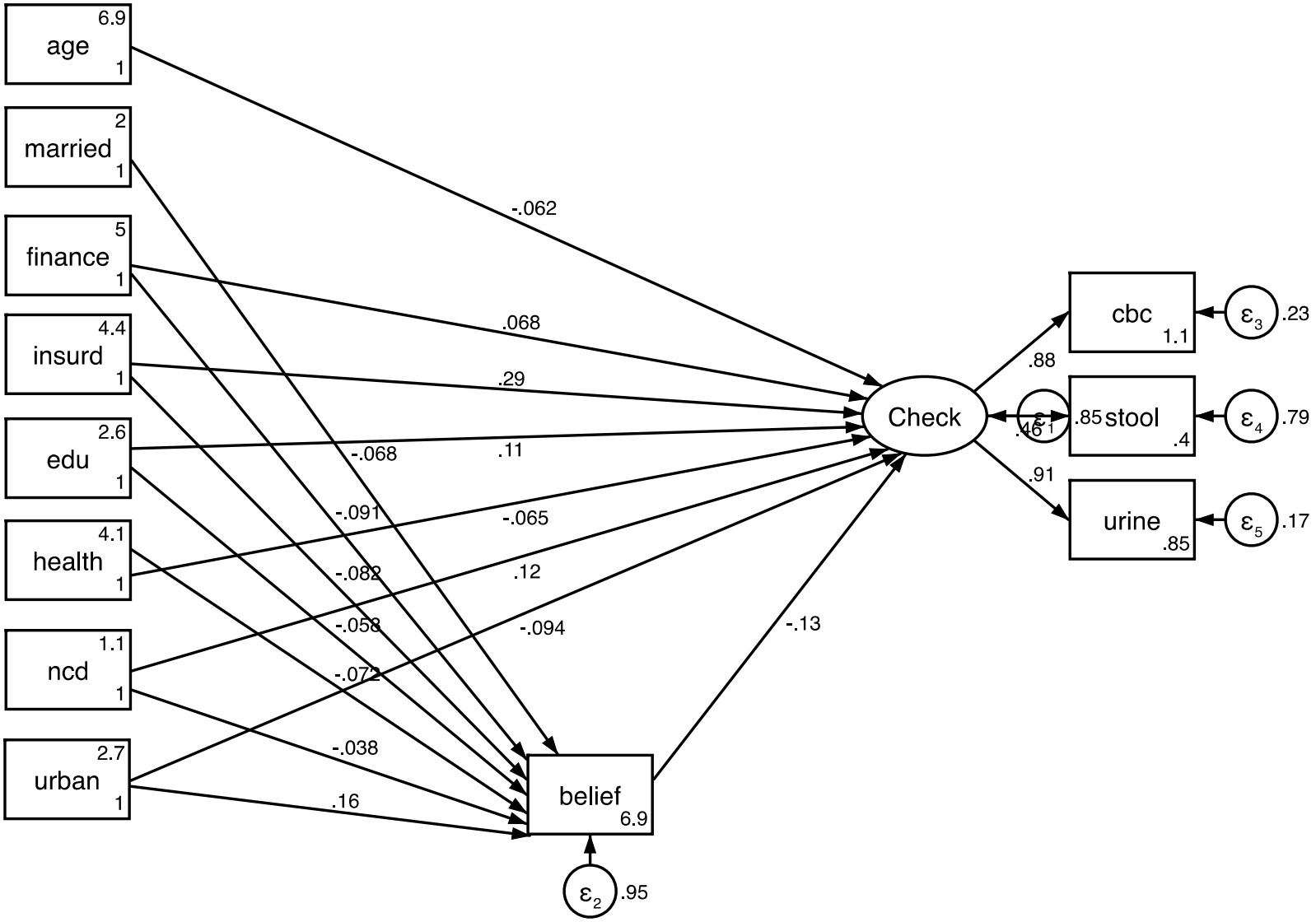
Data analysis

- Structural equation modeling (Stata 14)
- Goodness of fit
  - The Chi-square statistic tests: >0.05
  - The root mean square error of approximation (RMSEA) :<0.08
  - The standardized root mean square residual (SRMR) :<0.05
  - The Comparative Fit Index (CFI) :>0.90

Table 1 Characteristics of the Participants

Characteristics	Total sample (n=3418)
Self-reported health status	
Very good	9.1
Good	28.7
Fair	49.9
Poor	10.9
Very poor	1.4
Finacial status	
Very good	1.2
Good	17.4
Fair	69.7
Poor	9.4
Number of chronic diseases (mean±SD)	1.0±0.9
Health belief (mean±SD)	28.7±4.9
Health-prevention screenings	
CPC	64.2
Urinalysis	54.2
Stool analysis	23.1


Female
Age
Married
Finance
Insurance
Education
Urban
NCD
Health
Health Belief
Health-prevention Screenings
CPC
Urinalysis
Stool analysis


6.9
age
1
2
married
1
5
finance
1
4.4
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2.6
edu
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4.1
health
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1.1
ncd
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2.7
urban
1
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.12
-.058
-.094
-.072
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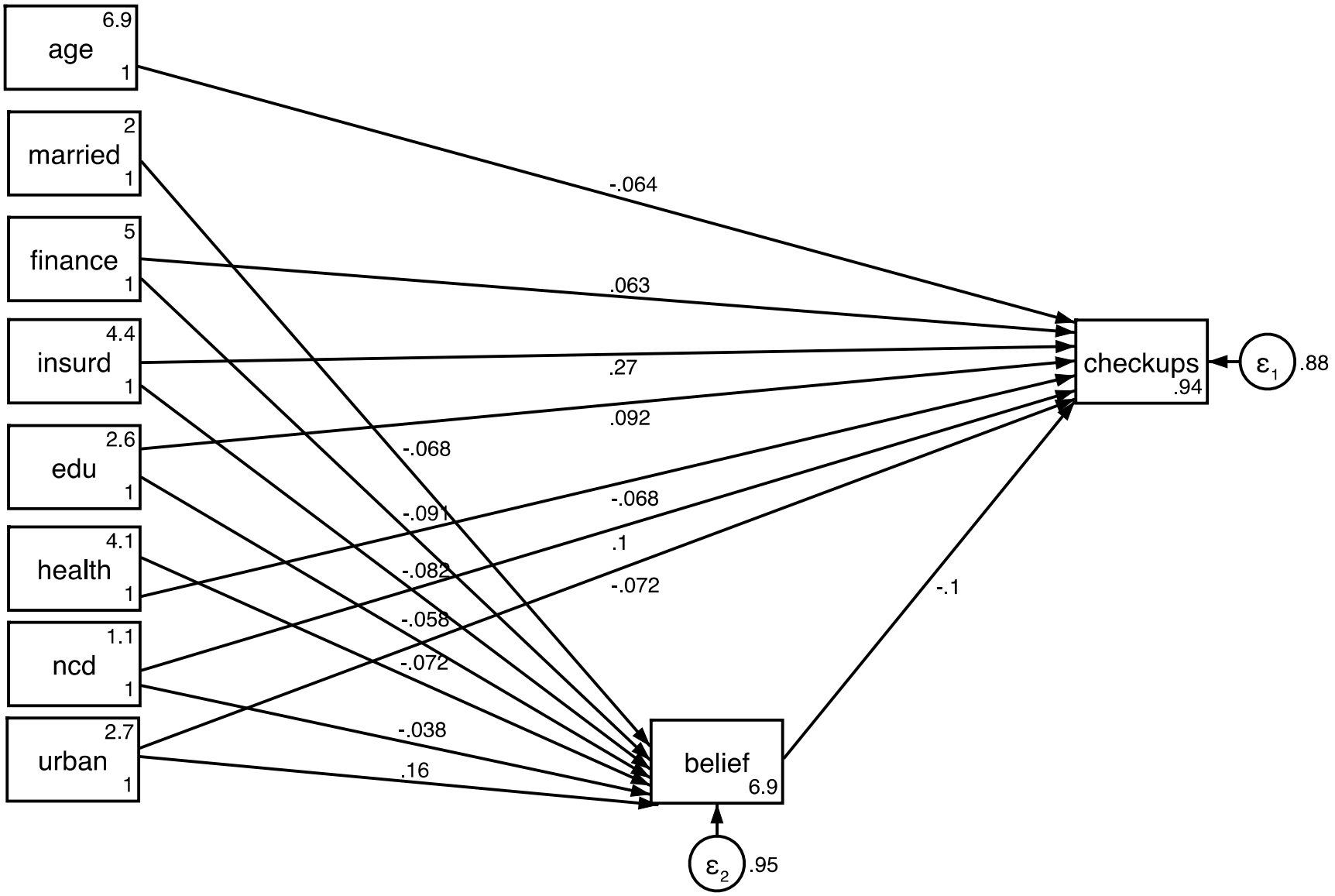
.16
belief
6.9
ε2
.95
-.13
Check
.88
.46
ε1
.85
.91
cbc
1.1
stool
.4
urine
.85
ε3
.23
ε4
.79
ε5
.17

Direct, indirect effects

Outcome	Direct effect	Indirect effect	Total effect
Health belief			
Edu→belief	-0.23***	-	-0.23***
Insurance→belief	-1.84***	-	-1.84***
Finance→belief	-0.72***	-	-0.72***
Urban→belief	2.46***	-	2.46***
Health-prevention screenings			
Edu→screenings	0.04***	0.01**	0.05***
Insurance→screenings	0.57***	0.02***	0.59***
Finance→screenings	0.05**	0.01***	0.06***
Urban→screenings	-0.12***	-0.03***	-0.15***
Belief→screenings	-0.01***	-	-0.01***

Goodness of fit

Model Fit Index	
chi2_ms	127.469
chi2_bs	3995.238
RMSEA (90%CI)	0.045 (0.037-0.052)
CFI	0.973
SRMR	0.014


6.9
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ncd
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urban
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-.091
-.082
-.058
-.072
-.038
.16
-.068
.1
-.072
-.1
checkups
.94
ε1
.88
belief
6.9
ε2
.95

Conclusion

- Confirm the direct and indirect relationships between social stratification and health-prevention screenings,
- heath belief medicates the relationships between social stratification and health-prevention screenings

Implications for Nursing Practice

- Empirical evidence on how health belief mediates the effects of social stratification on performance of health-prevention screenings among Chinese elderly
- Culturally appropriate preventive care interventions are urgently needed

Limitations

- Urban population in Shanghai
- Cross-sectional data

Thank you

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