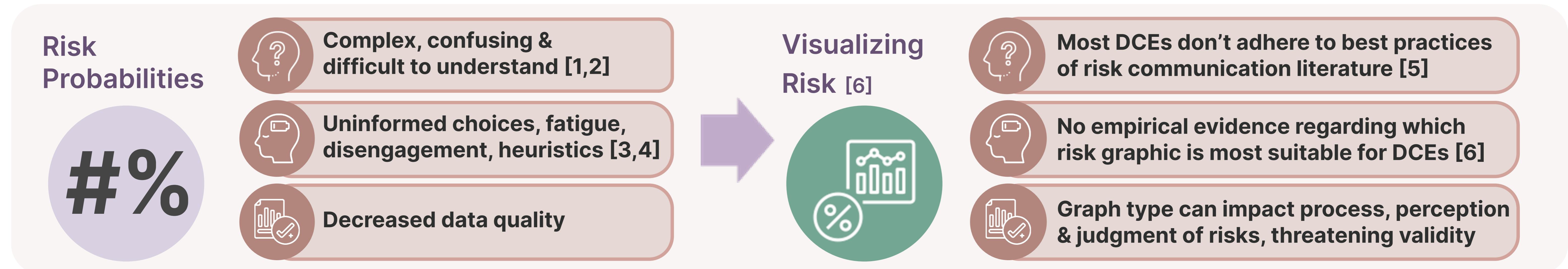


VISUALIZING RISK

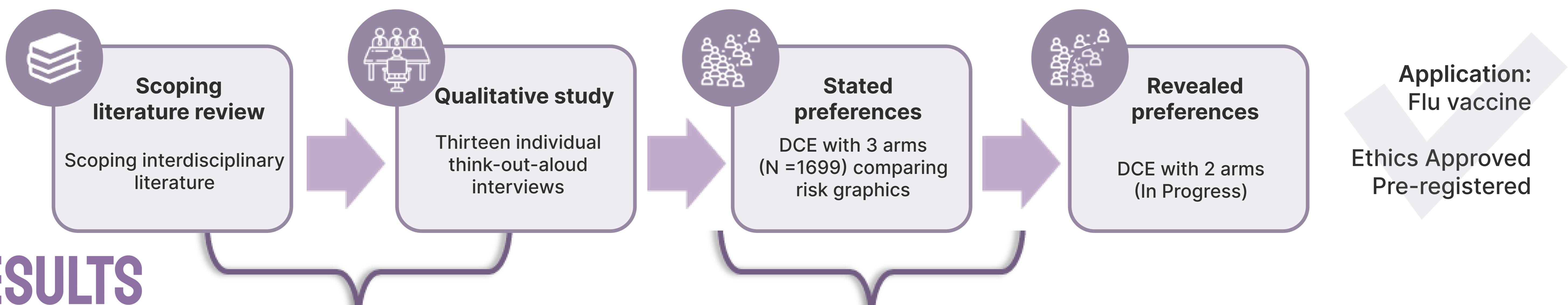
Risk Graphics' Impact on Patient Understanding and Choices in Preference Studies

Stella M. Marceta, Esther de Bekker-Grob, Tom Van Ourti & Jorien Veldwijk

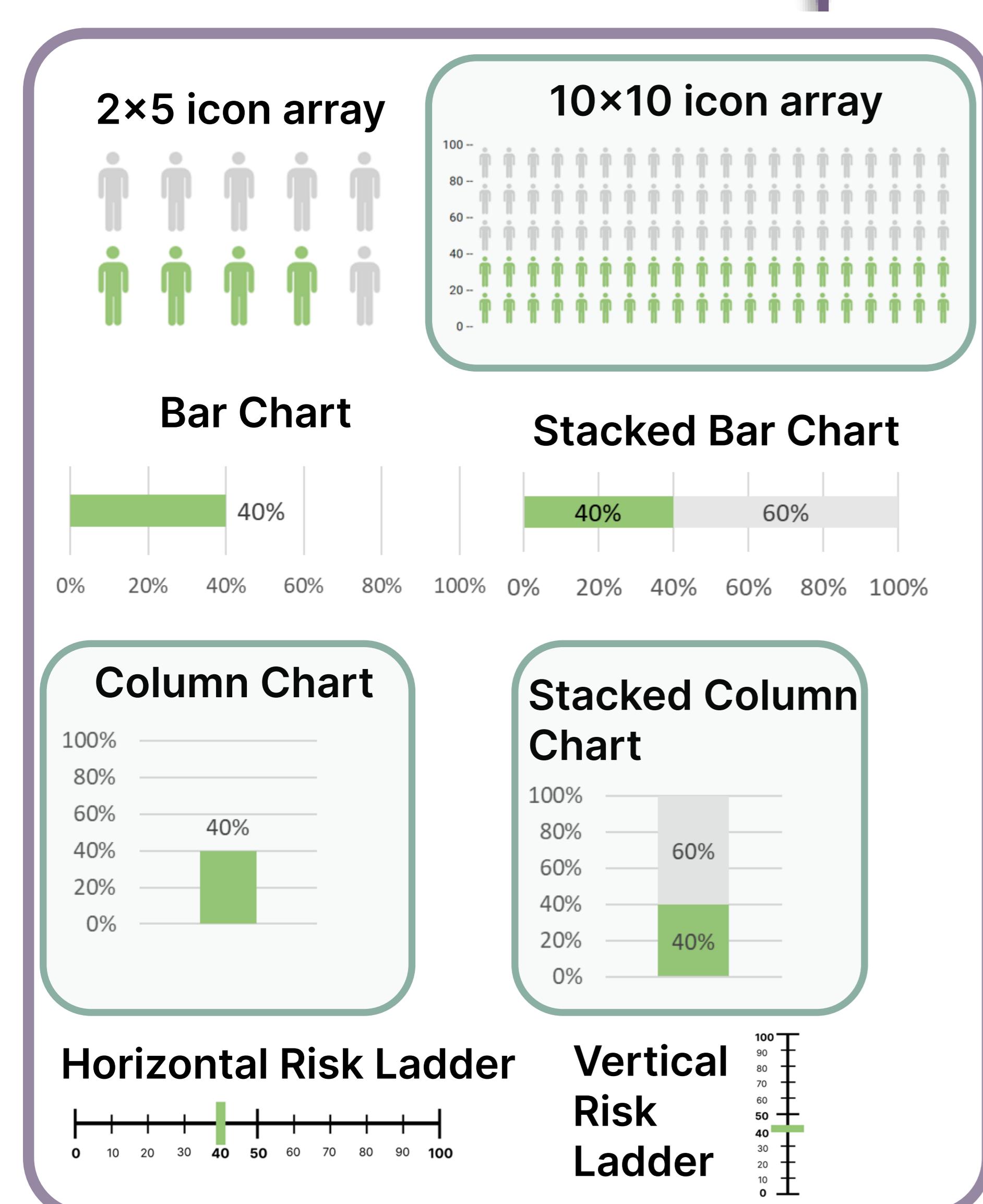
BACKGROUND



RESEARCH DESIGN



RESULTS



Internal validity indicators IA = Icon Array; CC = Column Chart; SCC = Stacked Column Chart

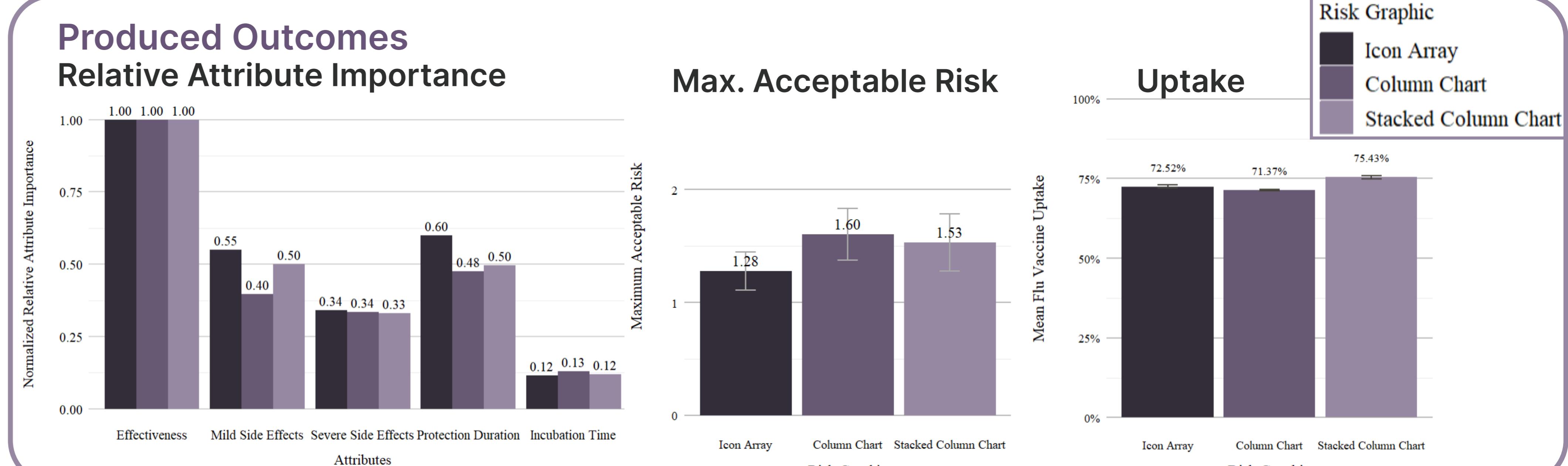
Measures	Full Sample	L. Educated	L. Health Lit.	L. Numerate
Gist C.	IA>CC>SCC*	SCC>IA>CC	IA>SCC>CC	IA>SCC>CC
Verbatim C.	SCC>IA>CC*	SCC>IA>CC*	IA>SCC>CC*	SCC>IA>CC
Usage	SCC>IA>CC	SCC>IA>CC	SCC>IA>CC	SCC=IA>CC
Helpfulness	SCC>CC>IA	SCC>CC>IA	SCC>CC>IA	SCC>CC>IA
Validity	IA>CC>SCC	IA>CC>SCC	IA=CC>SCC	IA>CC>SCC**
Reliability	CC>IA>SCC	IA=CC>SCC	IA>CC>SCC**	CC>IA>SCC

Notes: Statistical significance is indicated if Bonferroni-adjusted p-values of pair-wise Chi-Square tests if **one** of the indicators was significant:
* p < 0.1; ** p < 0.05; *** p < 0.01 ***

Measures are comprised of the following indicators:

- Gist C: Effectiveness & Mild SE Gist comprehension
- Verbatim C: Effectiveness Numerator, Effectiveness Denominator, Mild SE Numerator & Mild SE Denominator Verbatim comprehension
- Usage: Always/Sometimes used graphic
- Helpfulness: Perceived Helpfulness for understanding probabilities & for completing choice tasks
- Validity: Within-set monotonicity & Across-set monotonicity
- Reliability: Test-re-test reliability & Choice consistency in Heteroscedastic MNL

Icon Arrays & Stacked Column Chart are associated with higher internal validity across respondent groups



DISCUSSION

- Qualitative results suggest 10x10 icon array, column chart and stacked column chart are preferred & best understood
- Quantitative results suggest that 10x10 icon array and stacked column chart yield higher internal validity
- Slight, but non-significant differences in produced outcomes between icon array and column charts
- External validity check will guide recommendation

Acknowledgment

The project is supported by the Erasmus Initiative 'Smarter Choices for Better Health' & the 'Erasmus Trustfonds' foundation.

Competing interest

The authors declare that they have no conflict of interest.