

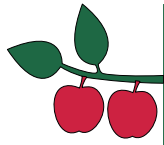
HARMONIZING MEASURES OF DEPRESSIVE SYMPTOMS: THE CONSORTIUM ON INTERPLAY OF GENES AND ENVIRONMENT ACROSS MULTIPLE STUDIES



Presenter:

Margaret Gatz for the IGEMS Consortium

Studies



DANISH TWIN REGISTRY
UNIVERSITY OF SOUTHERN DENMARK

MADT

Middle-Age Danish Twin study

LSADT

Longitudinal Study of Aging Danish Twins



MTSADA

Minnesota Twin Study of
Adult Development and Aging



Swedish Twin Registry



TOSS

Twin Offspring Study in Sweden

SATSA

Swedish Adoption/Twin Study of Aging

Gender

Health among Men and Women in Aging

OCTO Twin

Origins of Variance in the Old-Old

Midlife in the United States

Twin Screening Project



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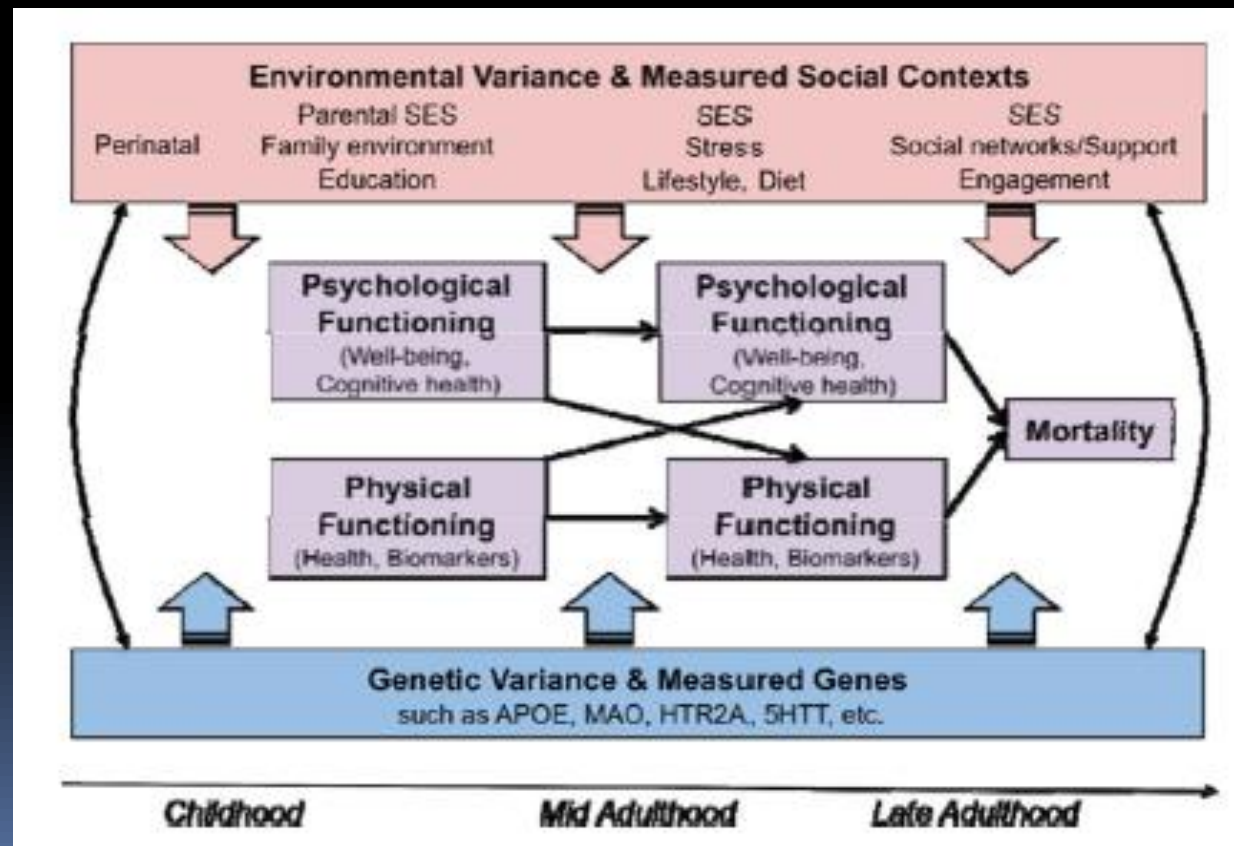
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GOALS of IGEMS

- 1 Harmonize social phenotypes and aging outcomes to enable combined analysis
- 2 Investigate the impact of early and current social context effects and G and E interplay on late-life functioning



Methods leading to combined analysis

- Develop common administrative file structure:
 - demographic variables, last vital status, age at each assessment, and reasons for non-participation
- Create spreadsheets for measures that correspond to constructs in the model:
 - include questions and response options
- Where a common metric not available, collect a new sample who completed questionnaires corresponding to all of the ways that different studies assessed a particular phenotype

Crosswalk Sample

		Men <60	Women <60	Men 60+	Women 60+
MTurk	N=	192	215	32	27
TrialMatch	N=	16	120	116	224
Healthy Minds	N=	3	6	15	37
Other	N=	2	1	31	24
Total	N=	213	342	194	312

Depressive Symptoms Measures

CESD: 4 Swedish + 3 U.S. Studies

- 20 items
- 4-point response scale
- 4 subscales
 - Depressed mood
 - [Lack of] well-being
 - Psychomotor retardation
 - Interpersonal difficulties

CAMDEX: 2 Danish Studies

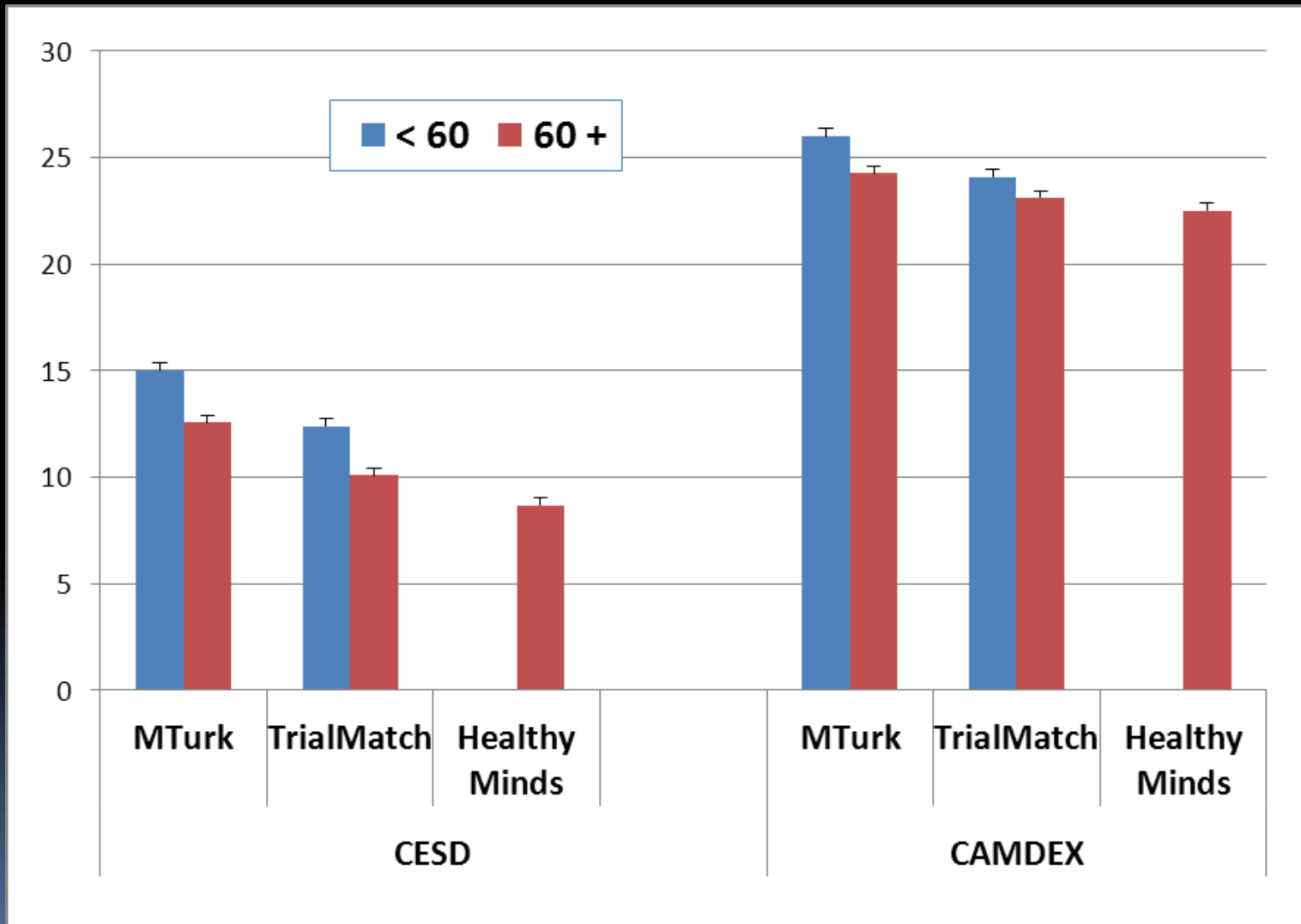
- 17 items
- 3-point response scale
- 2 subscales
 - Affect [sad mood and lack of well-being]
 - Somatic [cognitive difficulties, slowing, loss of energy]



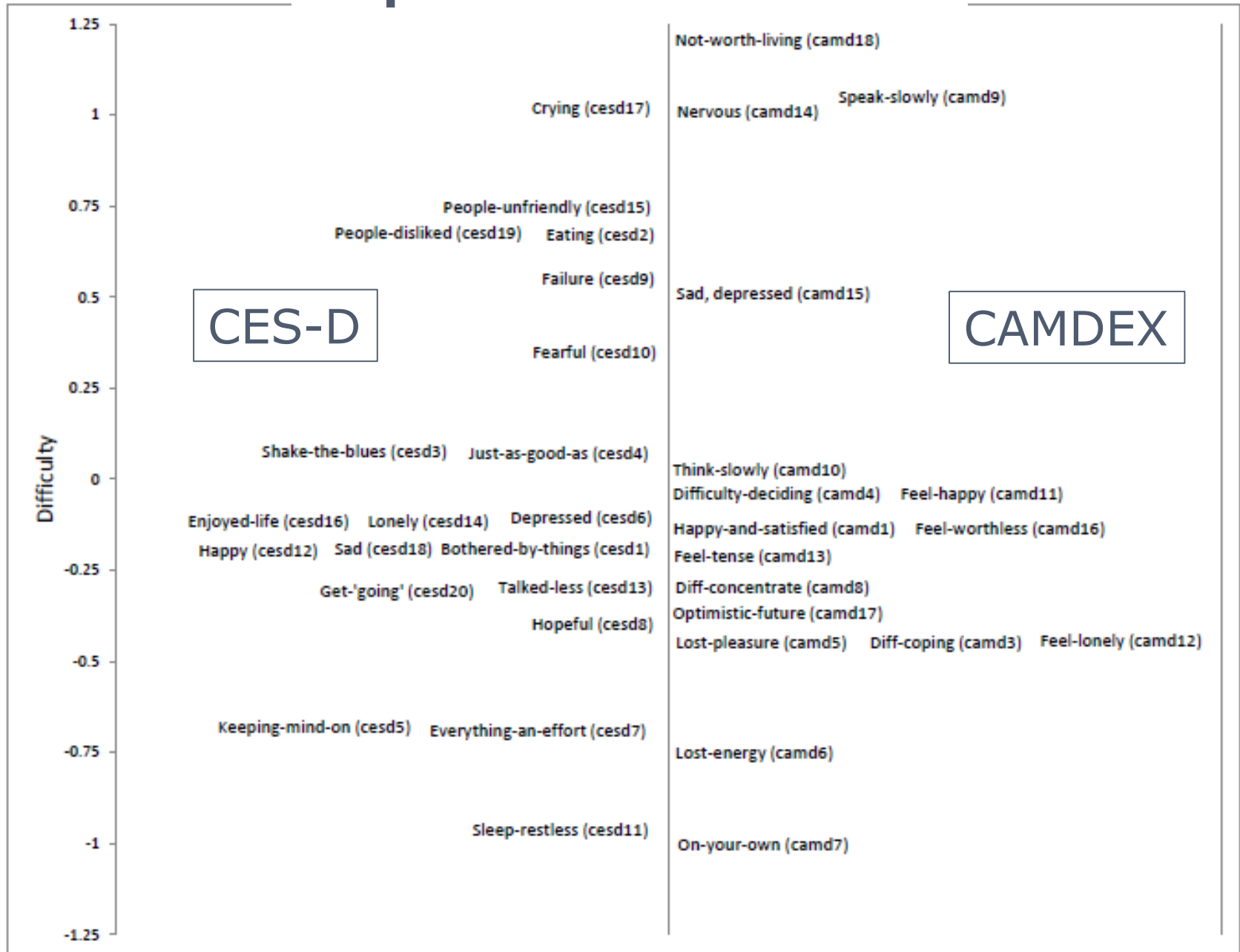
Categories of Harmonization Methods

- Rational: logical, semantic, lexical, recasting methods
- Empirical: proportional scoring or percentiles; use of IRT to create conversion table
- Configural: concept or factorial level

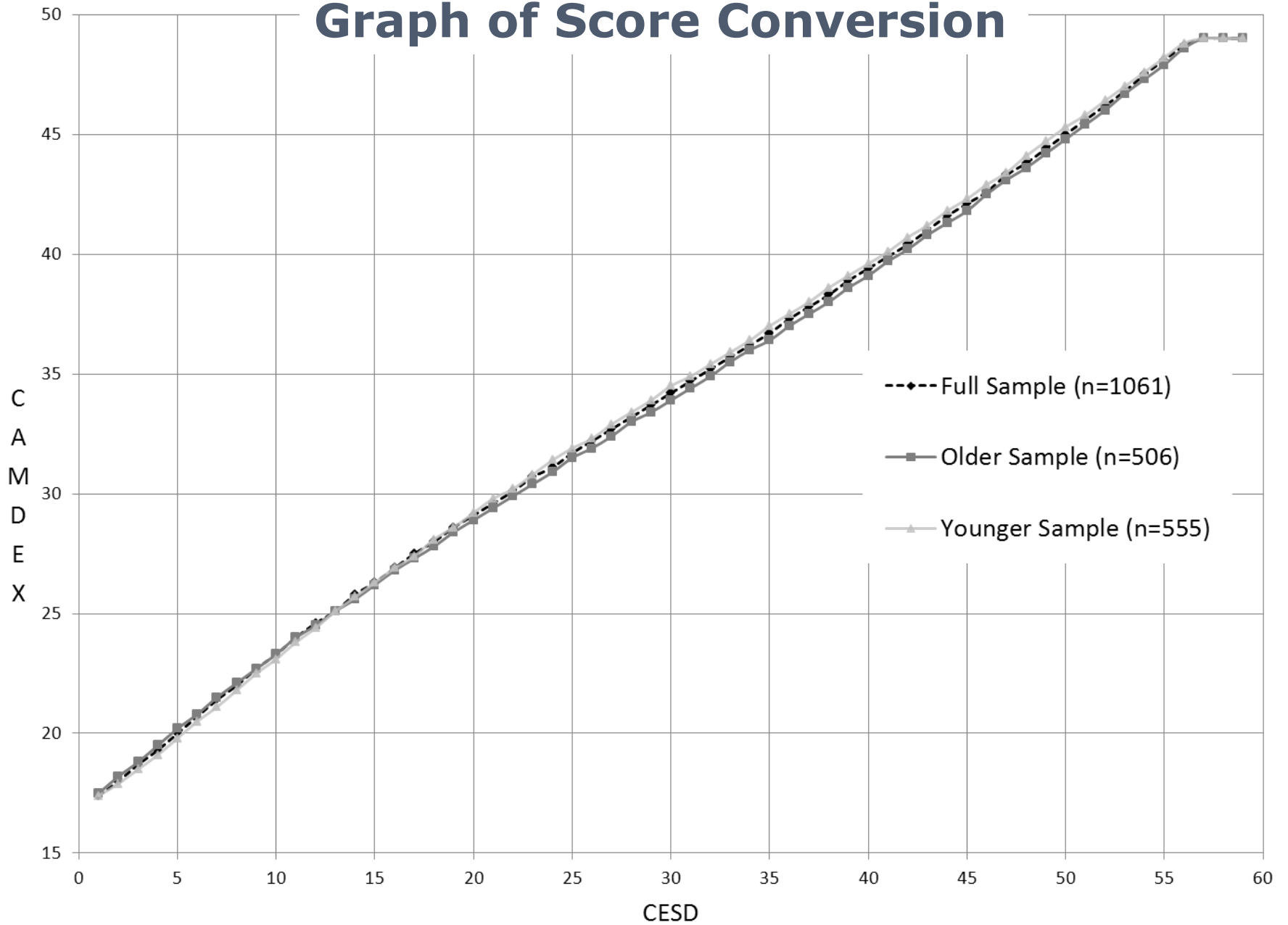
Mean scores on CESD and CAMDEX for Crosswalk Sample



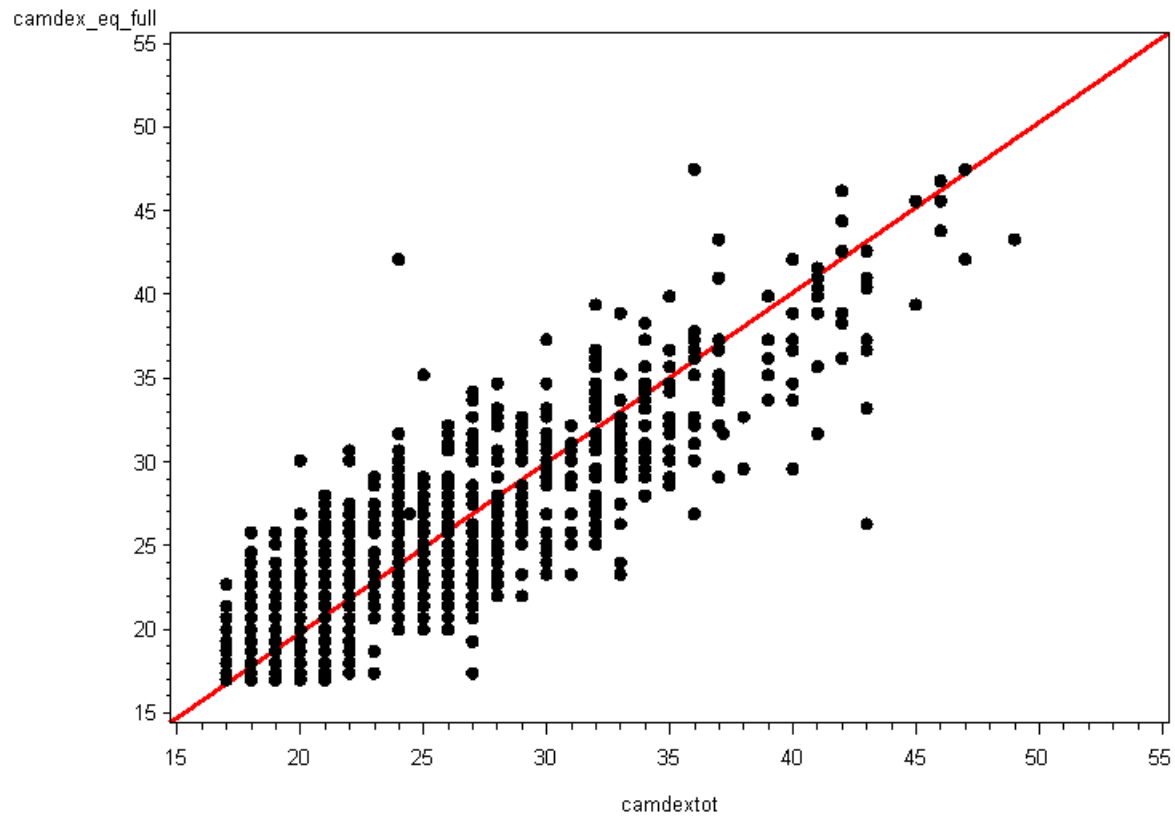
Map of Item Difficulties



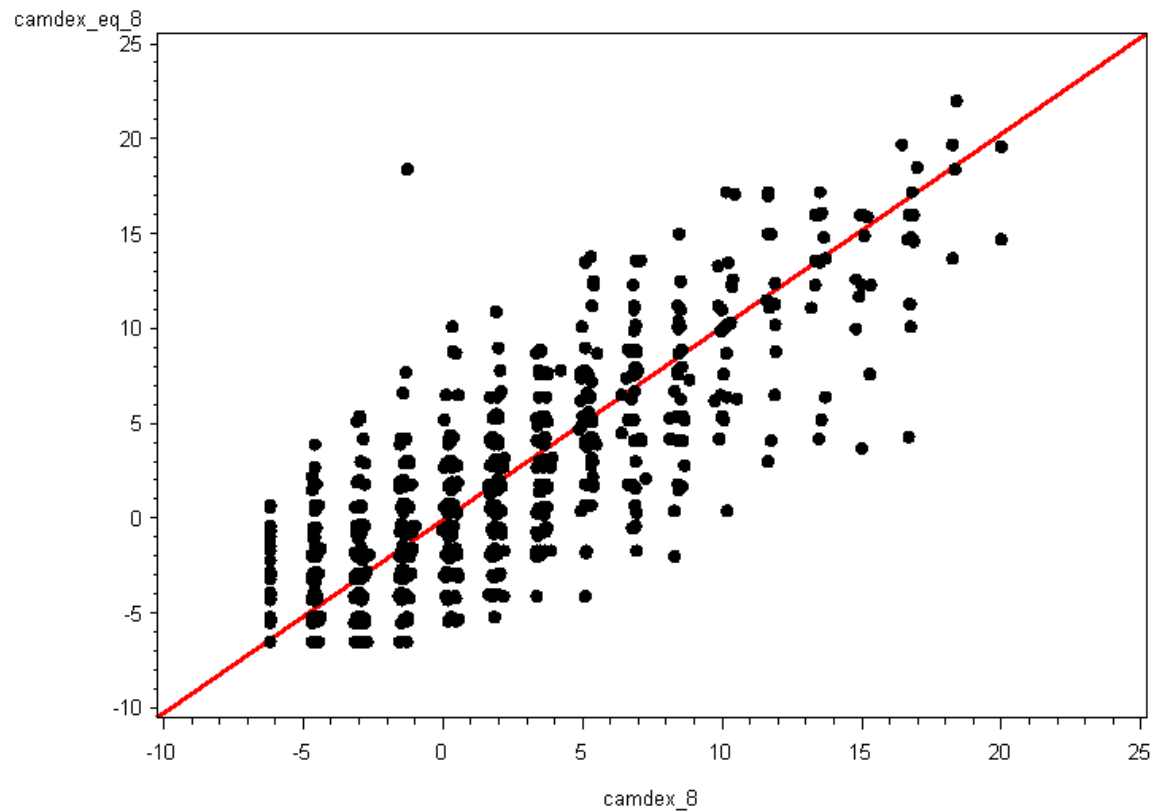
Graph of Score Conversion



Line of Identity plot of CAMDEX predicted v actual



Line of Identity plot of CAMDEX-8 predicted v actual



Summary and Conclusion

- Create linked sample administered both CESD and CAMDEX in counterbalanced order with unrelated material in between (vocabulary)
- Apply rational, empirical, and configuration harmonization methods
 - For CES-D and CAMDEX, the empirical method (IRT) was preferable to the configural method
 - Different measures pose different harmonization issues that might lead to different choices of harmonization method
- Based on crosswalk sample, calculate raw score conversion table to move forward with pooled analyses