Race/Ethnicity as a Moderator of Social Resources in Alzheimer's Family Caregivers

Louis D. Burgio, Ph.D.
The University of Michigan

Michelle M. Hilgeman, M.A.
Daniel W. Durkin, M.S.W.
The University of Alabama
Center for Mental Health and Aging

Acknowledgement

Study Aims

The primary aim of this study was to test the stress process model (SPM) proposed by Pearlin and colleagues (1990) in a racially diverse sample of Alzheimer's caregivers using structural equation modeling (SEM) and regression techniques.

A secondary aim was to examine race/ethnicity as a moderator of the relation between latent constructs (e.g., subjective stressors and role strain) in the SPM.

REACH II

- Multisite clinical trial (Birmingham, Memphis, Miami, Palo Alto, and Philadelphia)

- Implemented and evaluated a multi-component psychosocial intervention across five sites for 6 months.

- Data for 642 caregiver/care recipient dyads were collected in the randomized clinical trial
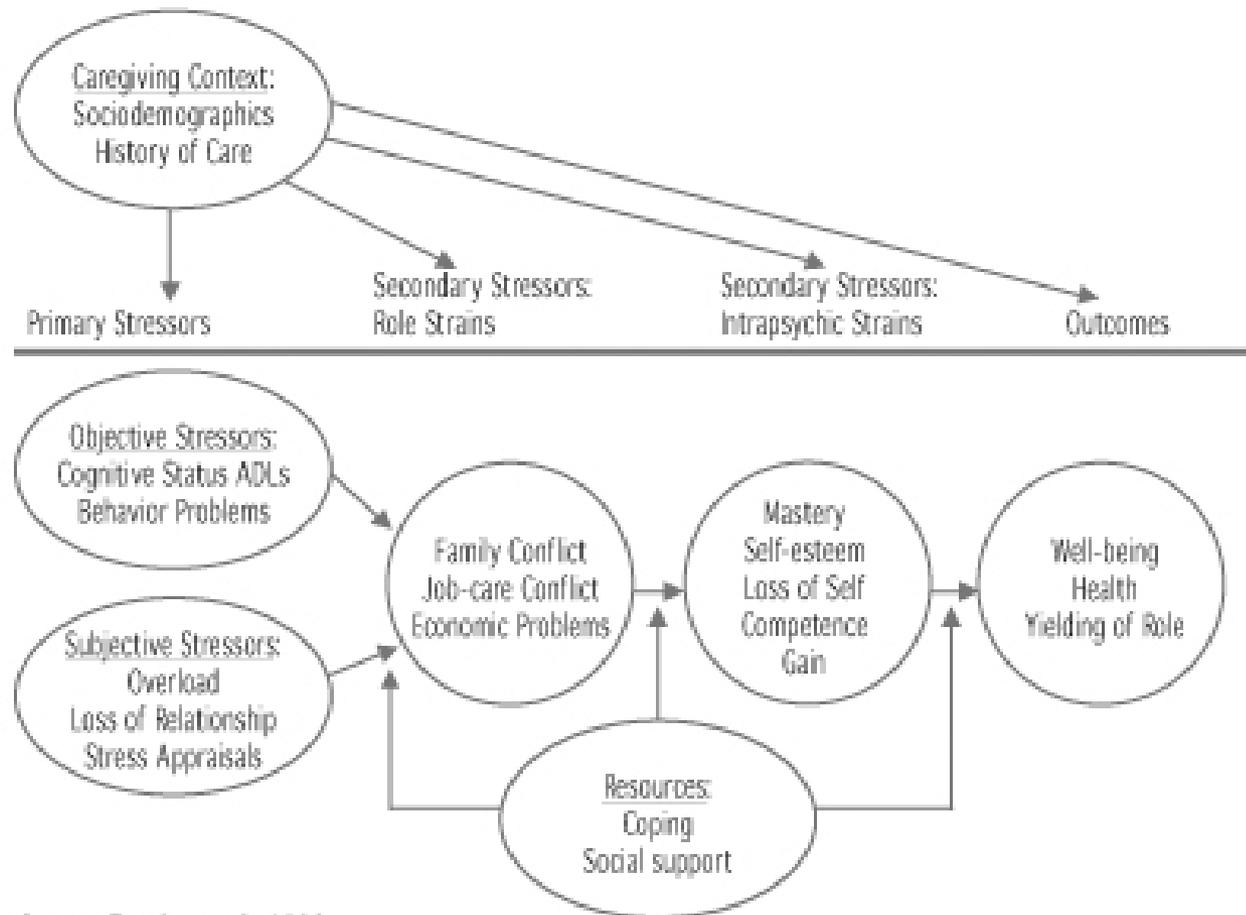
Sample

- Of the 642 caregivers included in the study, 33 were excluded due to missing baseline data.

- Study N = 609

- $n = 212$ (34.8%) White/Caucasian, $n = 201$ (33%) Black/African American and $n = 196$ (32.2%) Hispanic/Latino

- Recruited from multiple community organizations with special attention paid to the recruitment of minority caregivers
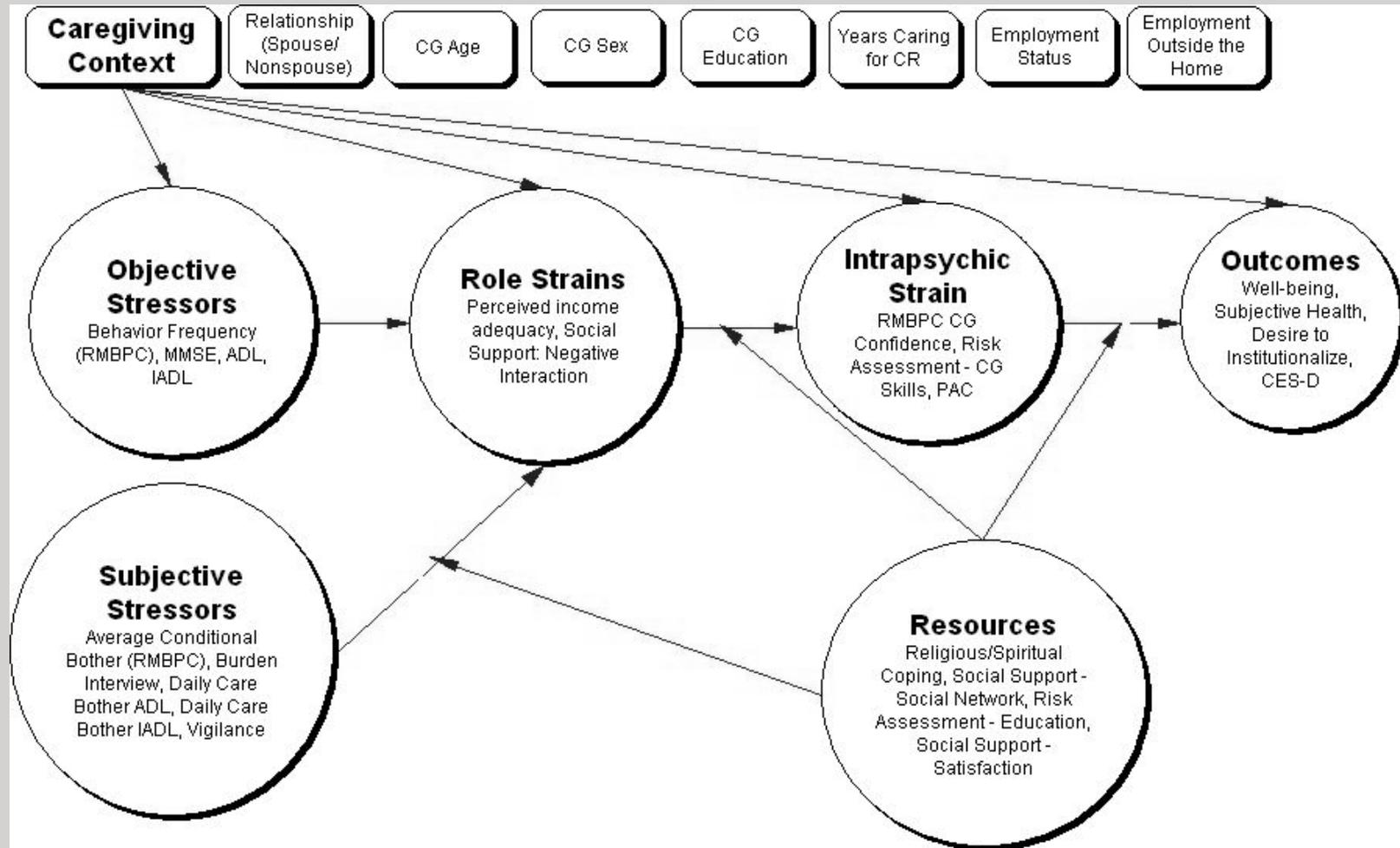
Sample Cont.

- CGs at least 21 years old, living with or sharing cooking facilities with the CR, providing an average of four or more hours of care per day to a CR with at least two functional impairments of IADL or one ADL

- Providing care for at least the last six months, and reporting at least two symptoms of distress associated with caregiving

- CR had to have a diagnosis of ADRD or a MMSE score of 23 or lower; however,

- Bed-bound CRs with a score of zero on the MMSE were excluded.

Pearlin SPM

Sources: Pearlin, et al., 1990
Aneshensel et al., 1995

Study Model

Methods

- Secondary data drawn from the baseline assessment
- Latent variable approach used in order to include interaction effects (Jöreskog, 2000)
- Step 1: SEM used to estimate values of the latent variables in the model from observed measurements
- Step 2: latent values are then saved to a data set, and the relations among them are then examined using regression analysis
- Values for the latent constructs were centered and standardized prior to testing interaction effects
- CG context variables were not combined into a single latent construct but entered into each model individually

Methods Cont.

- The primary aim of the study, testing the predictive ability of the Pearlin model as a whole, was addressed both by examining the fit of the SEM as well as the explanatory abilities of the regression models.

- The secondary aim of the study, determining whether the predictive ability of the Pearlin model varies by race, was addressed by determining whether the relations between the latent constructs in the regression models were significantly moderated by race.

Results: Primary Aim

- Confirmatory factor analysis suggested the measurement model was fit.

- Four separate regression models were used to test the relations among latent constructs in the SPM for the overall sample.

- Regression model predicting Objective Stressors (1) not significant, thus CG context variables were not collectively a significant predictor of objective stressors.

- Other 3 regression models predicting Role Strain (2), Intrapsychic Strain (3), and Outcomes (4) all significant.

Results: Primary Aim Cont.

- Younger caregivers reported significantly more objective stress (1).

- Younger caregivers, non-spouses, those experiencing more subjective stressors, and those with fewer resources experienced more role strain (2).

- Significant interaction between resources and subjective stressors, such that the effect of stressors on role strain was magnified for those with fewer resources (2).

Results: Primary Aim Cont.

- More role strain, fewer resources, being female, being a spouse, and more education were related to higher levels of intrapsychic strain (3).

- CGs who were female, had lower education, had fewer resources, and higher intrapsychic strain had more negative outcomes (4).
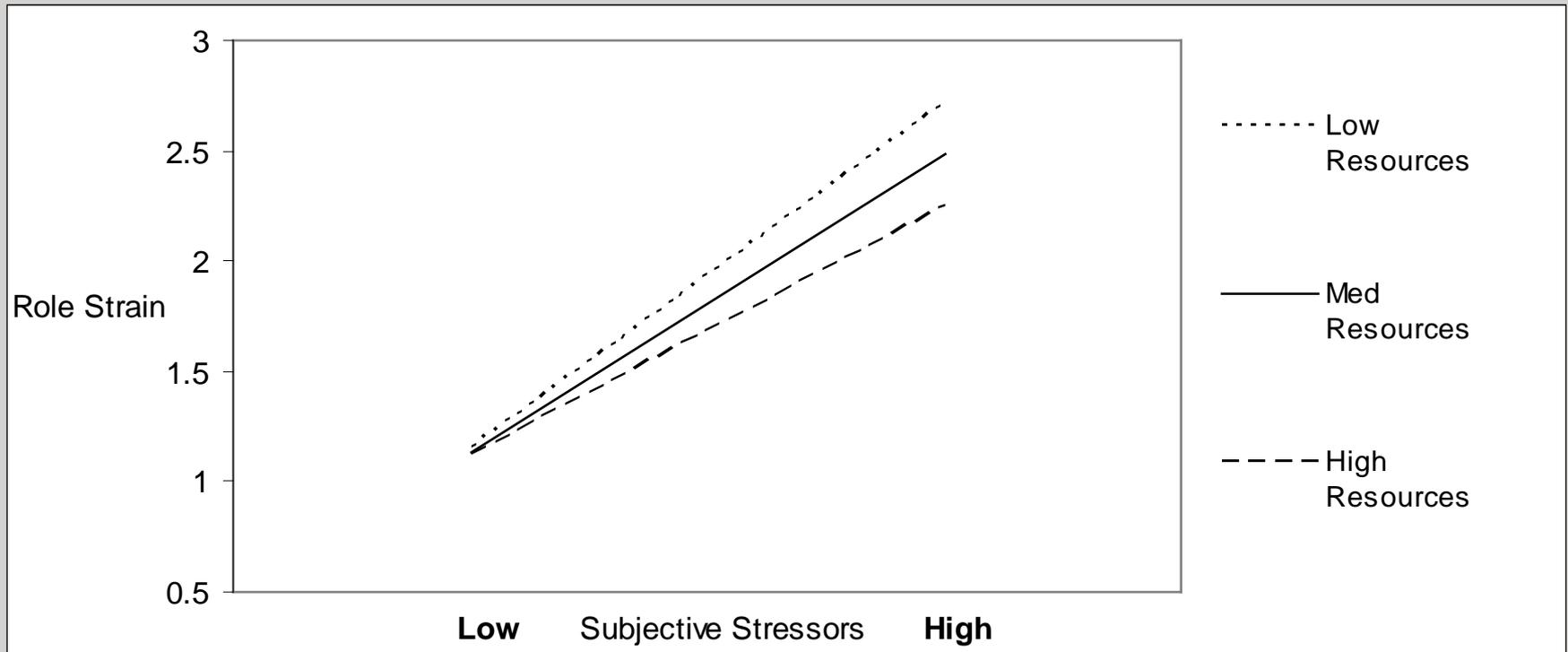
Results: Secondary Aim

- Four separate regression models were used to test the relations among latent constructs in the SPM for the overall sample.

- Secondary Aim added the main effect of race as well as the interaction of each of the original effects with race.

- Regression model predicting Objective Stressors (1) not significant.

- Other 3 regression models predicting Role Strain (2), Intrapsychic Strain (3), and Outcomes (4) all significant.

Results: Secondary Aim Cont.

- Younger caregivers, caregivers who were employed, those experiencing more subjective stressors, and those with fewer resources experienced more role strain (2).

- B/AA CGs had significantly more role strain than W/C and H/L CGs (W/C and H/L CGs not significantly different).

- There was a significant interaction between resources and subjective stressors, such that the effect of stressors on role strain was again magnified for those with few resources.

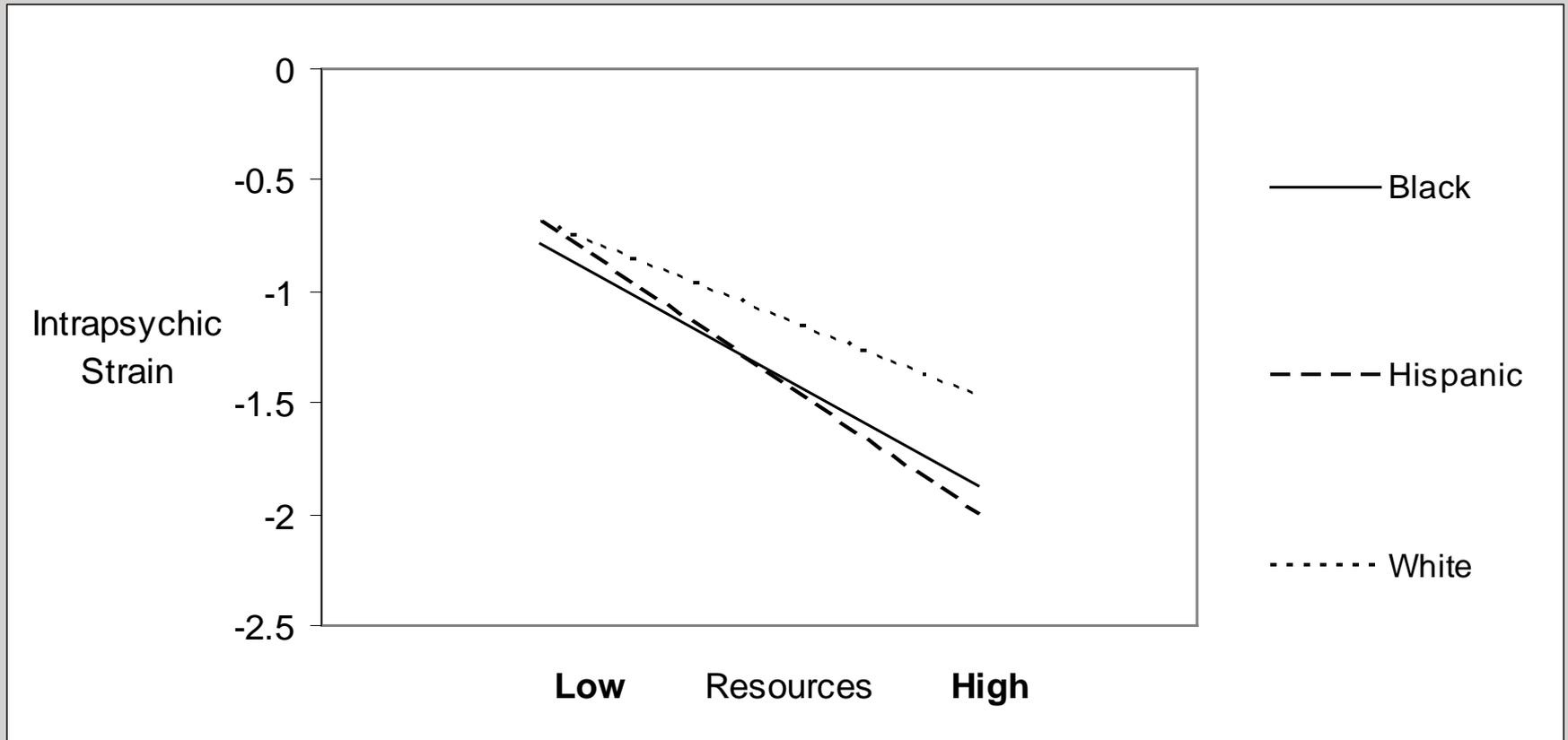# Resources x Subjective Stressors – Role Strain

Results: Secondary Aim Cont.

- More role strain, fewer resources, being female, being a spouse, and more education were related to higher levels of intrapsychic strain (3)

- W/C had significantly greater intrapsychic strain than B/AA and H/L (B/AA and H/L were not significantly different).

- Race interacted with resources.

- CGs reported similar levels of intrapsychic strain across race at lower levels of resources, but W/C reported more intrapsychic strain than B/AA or H/L at higher levels of resources.

- CGs who were female, had lower education, had fewer resources, and higher intrapsychic strain had more negative outcomes (4)

Race x Resources – Intrapsychic Strain

Discussion

- Findings support interventions, such as REACH II, that simultaneously target multiple aspects of the SPM across racial/ethnic groups.

- While the SPM as a whole appears to fit the caregiving experience across racial/ethnic groups, supplemental analyses found significant differences in all of the individual components: objective stress, subjective stress, role strain, intrapsychic strain, resources, and outcomes by race.

- Interventions must target different, nuanced aspects of the stress process to provide optimal benefit for individuals of different cultural/ethnic backgrounds.

Discussion Cont.

- White/Caucasians experienced significantly greater intrapsychic strain, suggesting that they might benefit most from interventions that target intrapsychic concerns (e.g. learning to manage negative emotions).

- Among Hispanic/Latinos, high levels of resources seem more protective in reducing levels of intrapsychic strain suggesting a different intervention target, such as increasing knowledge about dementia and access to services.

Discussion Cont.

- For Black/African Americans, interventions that target role strain (e.g. negative social support) may prove to be most helpful.

- Programs that focus on improving communication skills among family members might be further developed for this group.