

Racism & Diabetes Outcomes

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Research Team

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How the Stress of Racism “Gets Under the Skin”

What is Racism?

- No clear consensus
- Exclusion of those defined as racially other from goods and services, opportunities and privileges, rights and powers, and social responsibilities and burdens. – Herman 1996
- Beliefs, attitudes, institutional arrangements, and acts that tend to denigrate individuals or groups because of phenotypic characteristics or ethnic group affiliation. – Clark (1999)

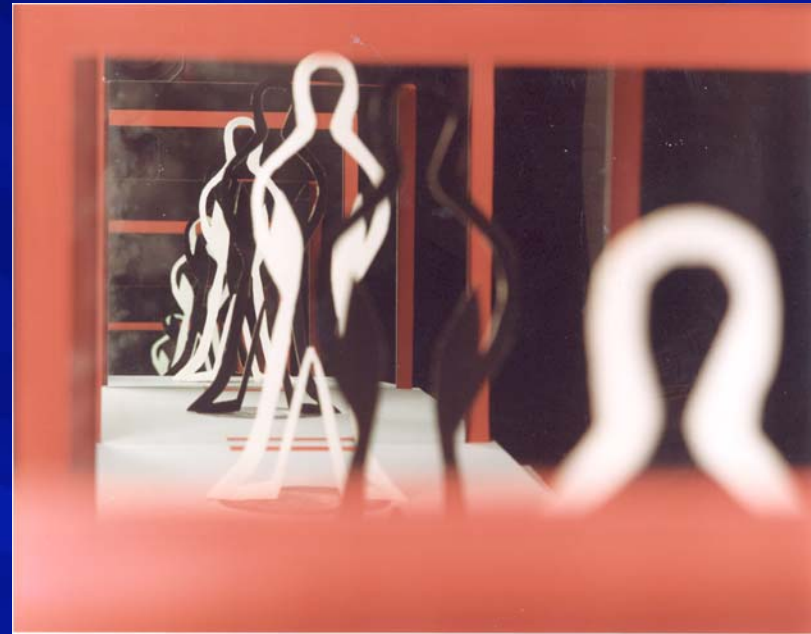
Individual Racism

- Application of power or influence with personal prejudice.
 - Medical services



Structural Racism

- Policy that is, intentionally or unintentionally, injurious to a race group.



Related Terms

- Prejudice
- Stereotype
- Discrimination

Evidence of Racism

■ Inter-group

- Higher education
- Restaurant industry
- Housing rental and sales
- Automotive sales
- Hiring practices

■ Intra-group

- Fraternities & sororities
- Business and social organizations
- Churches
- Education

Prevalence of Racism

- Common, but not frequent
- Lifetime:
 - 98% ever experience any racism
 - 77% service jobs
 - 74% strangers
 - 72% employers
 - 2/3 called a racist name
 - 1/2 pushed, shoved, hit, or threatened

Landrine & Klonoff (1997)

Stress and Stressors

- Hans Selye, 1926
- Stress: the sum of all nonspecific changes within an organism caused by function or damage.
- Stressor: a stimulus that engenders a stress response.
- Allostatic load

Appraisals

- An individual's perception or evaluation of a stimulus.
- Situations are evaluated in terms of:
 - Harm/Loss
 - Threat
 - Challenge

Who Says it's Racist?

- No a priori way of determining what will be perceived as racist by an individual.
- Individual perception more important than objective demands.
- Individuals who are exposed to such events may be primed to detect them in the environment.



Coping

- Cognitive and/or behavioral attempts to manage stimuli appraised to be stressful.
- Main taxonomies:
 - Emotion focused vs Problem focused
 - Approach vs Avoidance
 - General Stress: Periodontal disease (Wimmer 2005)
 - Racial Stress: Racism and blood pressure (Krieger 1996)

Acute & Chronic Stressors

■ Acute Stressors

- Major: Natural disaster (Kloner 1998)
- Minor: Daily hassles (Deinzer 2005)

■ Chronic Stressors

- Work (Cohen 1998)
- Marital (Kiecolt-Glaser 1994)
- Finances/SES (Macintyre 1997)
- Caregiving (Vitaliano 2005)
- Racism (Clark 1999)

Chronic x Acute Interactions

- Acute stressors that occur in the context of pre-existing chronic stressors have a larger effect than acute stressors that occur without background stress
 - General Stress: Immunity (Pike 1997)
 - Racial Stress: Blood pressure reactivity (Guyll 2001)

Stress & Disease Onset

- Stress can increase the likelihood of developing a disease.
 - General Stress: Work stress & the metabolic syndrome (Chandola 2006)
 - Racial Stress: Racism & glucose intolerance (Tull 2001)

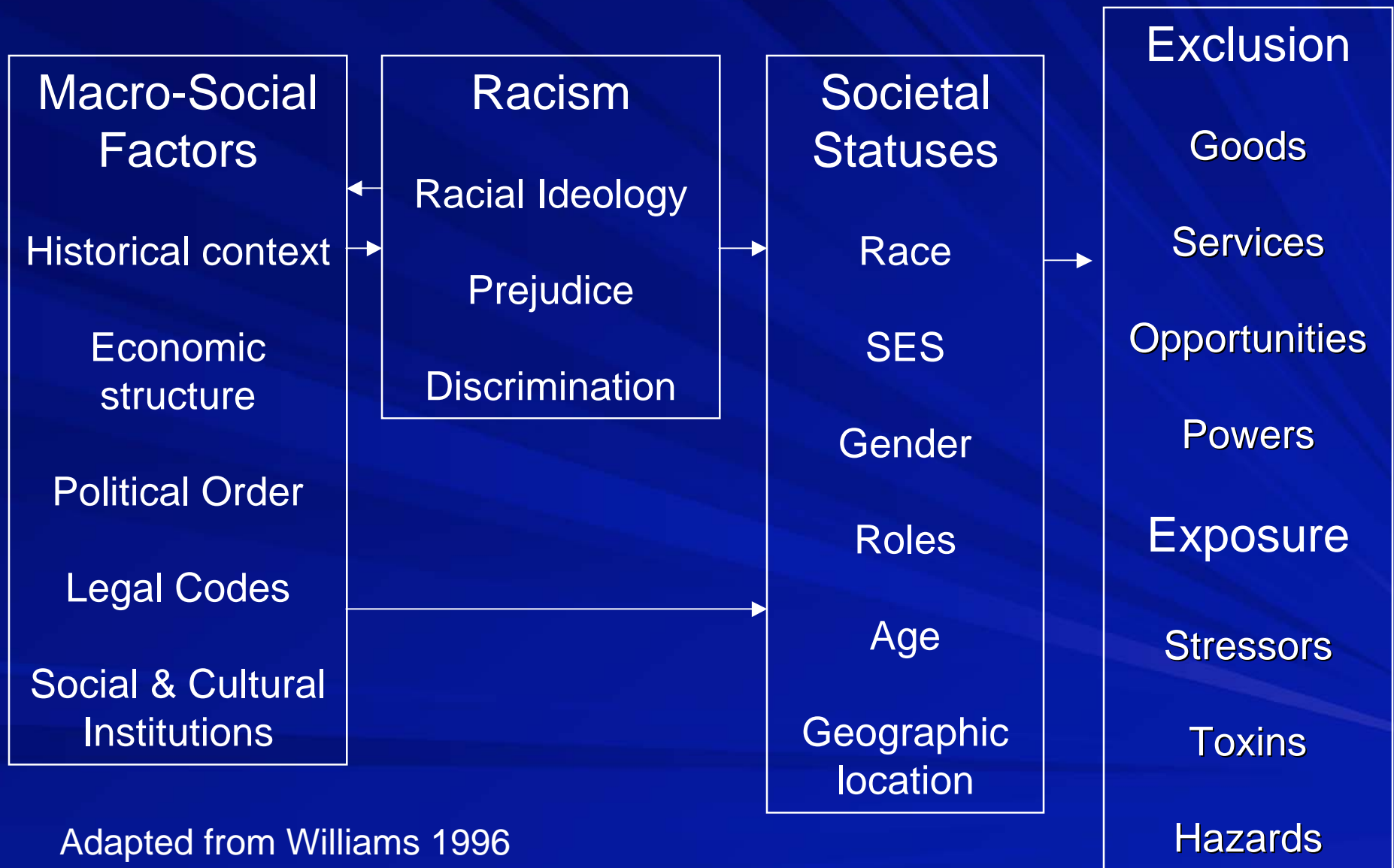
Stress & Disease Outcomes

- Stress can lead to worse outcomes and endpoints.
 - General Stress: Stress & cardiac events (Jiang 1996)
 - Racial Stress: Racism & preterm birth (Rosenberg 2002)

Racism as a Stressor

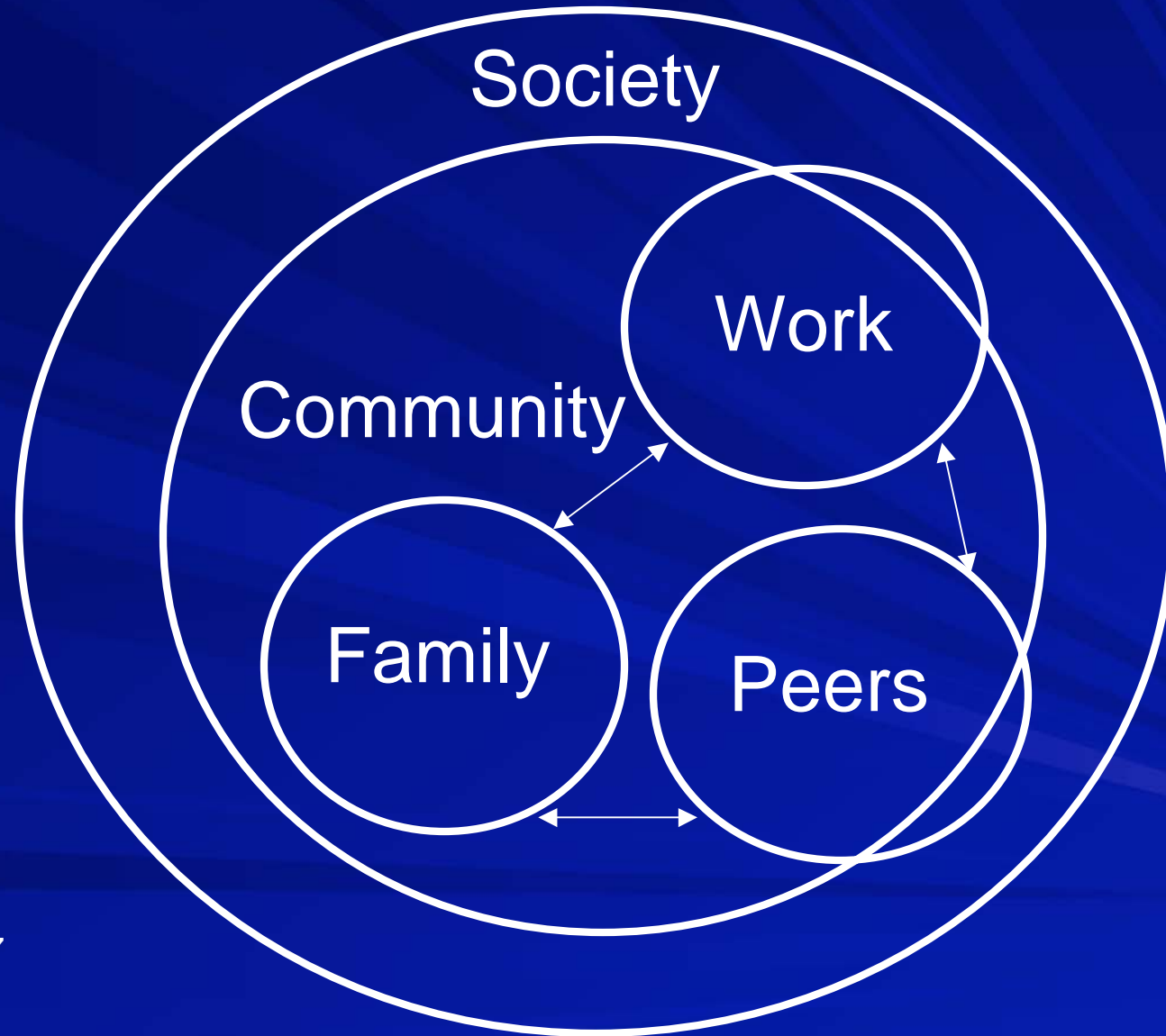
- Different models of how racism may lead to disease.
- 3 levels:
 - Societal
 - Interpersonal
 - Individual

Societal Level



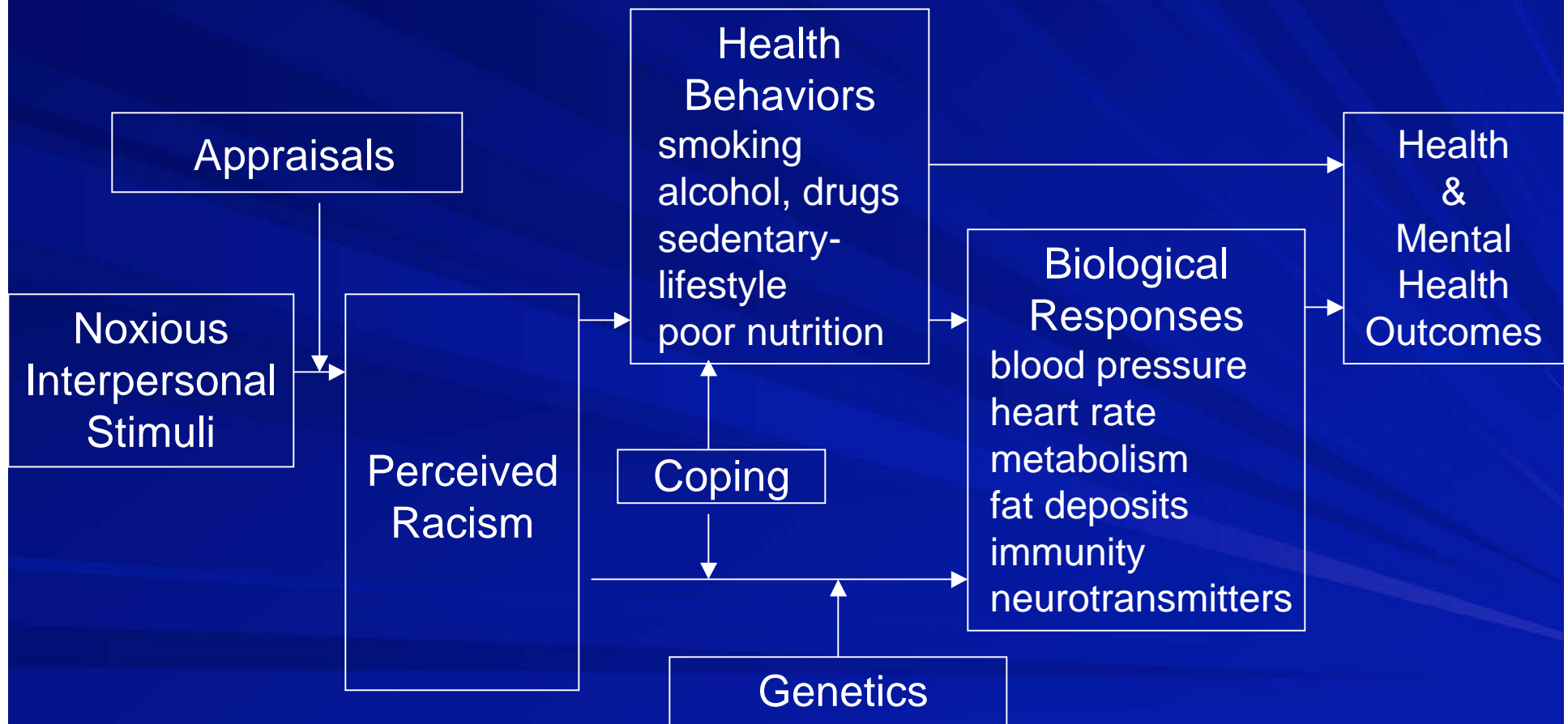
Adapted from Williams 1996

Interpersonal Level



Taylor 1997

Individual Level



Racial Stress and Health

- Perceived racism is common and stressful
- Higher perceived racism is associated with
 - Health Behaviors
 - Mental Health
 - Medical Outcomes
 - Higher BP
 - Higher BMI
 - Delayed stress recovery
 - Infant low birth weight
 - Risk for heart disease
 - Risk for diabetes



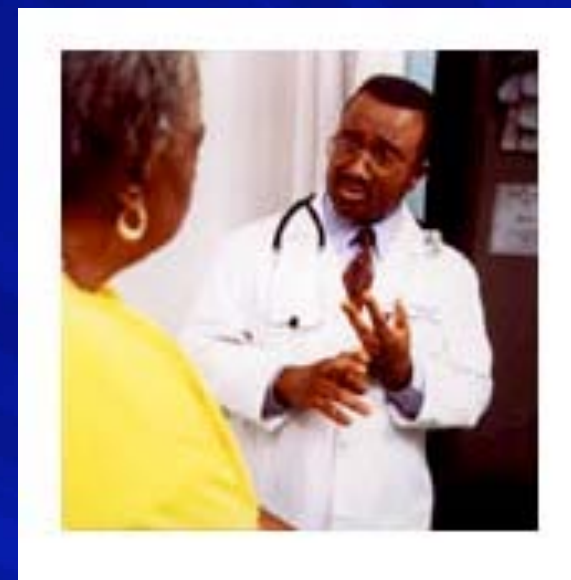
Why Study Racial Stress and Diabetes?

- Relative to Whites, African Americans are at increased risk for T2DM.
- Once diagnosed, African Americans are at increased risk for some long-term complications.



Why Study Racial Stress in Diabetic Women?

- Relative to Whites, African Americans are at increased risk for T2DM.
- Once diagnosed, African Americans are at increased risk for some long-term complications.
- AA women accumulate the risk of being both AA and female as evidenced by their even greater risk for long-term complications



Sample and Procedure

- Adults with diabetes attending diabetes health fairs who self-identified as Black or African American.
- Completed an anonymous questionnaire and had their blood pressure measured.
- Compensated \$5 for participation.

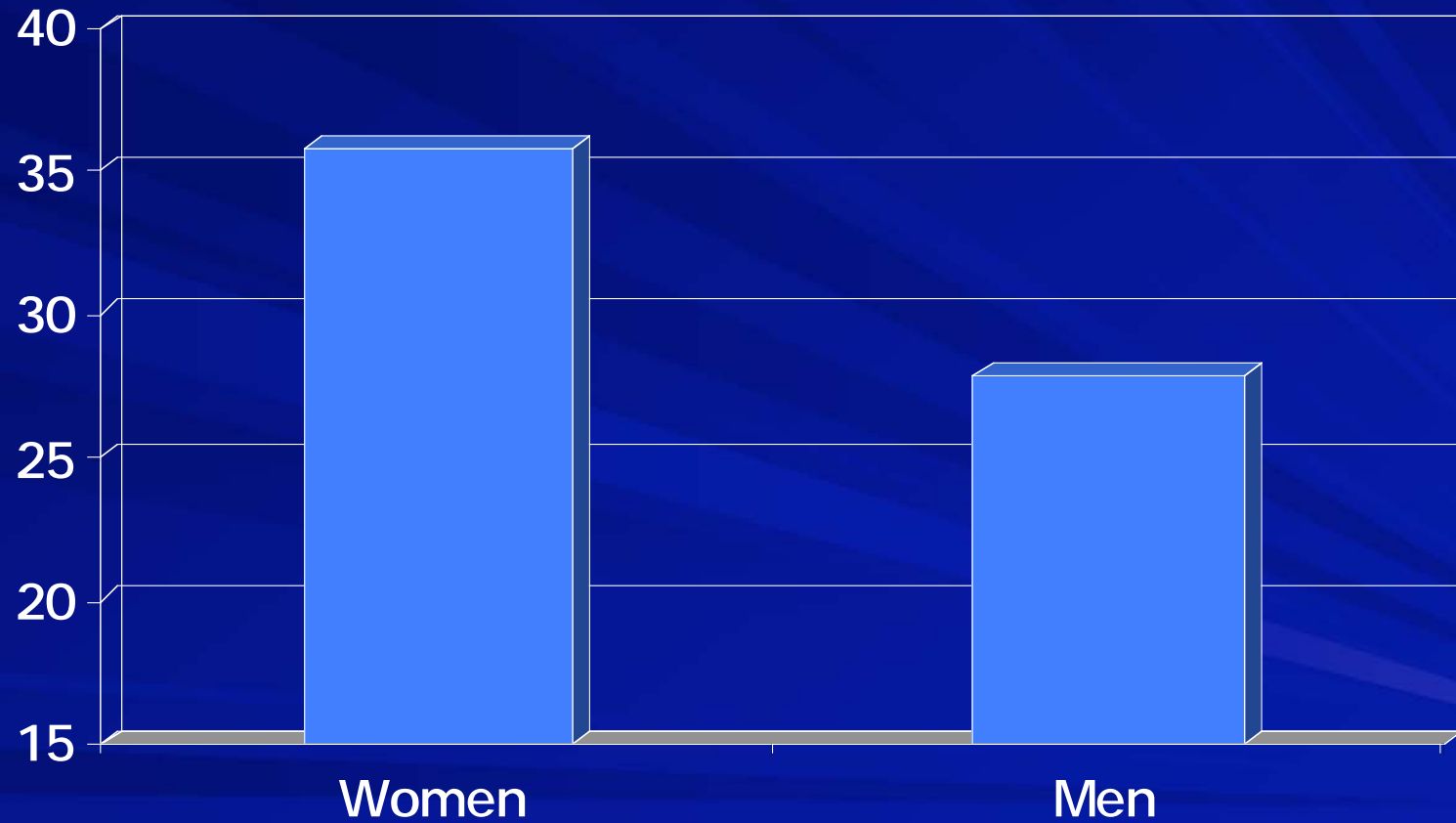
Perceived Racism

- Exposure to racial stress: The Schedule of Racist Events indicates the frequency and stressfulness of perceived racist events (Landrine & Klonoff, 1996).
 - “How often have you been treated unfairly by co-workers or colleagues because you are black?”
 - How stressful was that for you?
 - “How many times have you been really angry about something racist?”
 - How stressful was that for you?

Results: Participants

- 120 type 2 participants
- 74% women
- Age in yrs Mean = 55.7 (11.7)
- 89% had a primary care provider (PCP)
- Modal education = high school graduates
- Modal income = \$21-\$60K/year

Results: Racial Stress



* $p < .05$

Results:

Diabetes Self Care Behaviors

- After controlling for sex, SES, and insulin use, higher SRE frequency scores predicted more skipping self-monitoring of blood glucose.



Results: Depression

- After controlling for age, sex, diabetes type, SES, and A1c, higher SRE Frequency scores predicted higher depressive symptoms scores, and greater likelihood of clinically significant depressive symptoms.

Results: Depression Care

Experiencing discrimination in healthcare decreased the likelihood of reporting depressive symptoms to healthcare providers, and decreased likelihood of using pharmacotherapy for depression



Studying Racial Stress in the Lab

- 2 days
- Stressor Day: Public speaking stressor
- Control Day: Non-stressor
- Outcomes: immediate and 24-hour
 - Stress hormones
 - Blood pressure
 - Glucose
 - Health behaviors

Hypotheses

- Participants will show greater blood pressure, blood glucose, and health behaviors on the racial stressor day than the non-stressor day
- African American women will report more lifetime perceived discrimination
- Women who endorse more lifetime perceived discrimination will show a greater response than their low discrimination counterparts

Feasibility Study



- Does exposure to discrimination in everyday life serve as a chronic stressor, that increases physiological and behavioral reactivity to acute stressors, thereby encouraging development of diabetes complications?

Naturally Occurring Racial Stressors

- Within individuals, experiencing a racial stressor on a given day was significantly associated with:
 - Higher blood glucose ($r=.39$)
 - More hyperglycemic episodes ($r=.34$)
 - Higher ambulatory systolic blood pressure ($r=.64$)
 - Decreased correct dosing of blood pressure medications ($r=-.31$)

Long-Term Goal: Stress Management and Coping Skills Interventions

- Beneficial effects on disease outcomes:
 - Diabetes (Surwit 2002)
 - CAD (Blumenthal 2005)
 - HIV (Antoni 2006)
 - Cancer (McGregor 2004)



Conclusions

- Stressors can increase risk for disease in some individuals
- Racism is a source of stress
- Racism is associated with an increased risk for disease.
- Psychological interventions hold promise