

Does the Hispanic Paradox in Mortality Extend to Disablement?

Haebong Woo

Mark D. Hayward

University of Texas at Austin

Partial support for this research was provided by a research grant from the National Institute on Aging (RR55 AG19311) and an infrastructure grant from the National Institute of Child Health and Human Development (R24 HD042849). Our thanks to Robert Hummer and Eileen Crimmins for their insightful comments.



POPULATION RESEARCH CENTER

The University of Texas at Austin

The Hispanic epidemiological paradox is a scientific challenge to traditional assumptions about how social status is associated with health

- 🐮 National mortality estimates suggest that immigrant Hispanics – especially Mexican Americans – are very robust compared to native-born whites
- 🐮 Immigrant “story lines” as explanations – are Hispanics’ mortality advantages real or artifacts?
 - Healthy immigrant story
 - Salmon bias story
- Yet, most national studies show that some native-born Hispanic groups such as Mexican Americans have mortality risks comparable to native-born whites – despite Mexican Americans’ low levels of socioeconomic resources

How has the American Hispanic population changed recently?

- 🦘 The Hispanic population of the U.S. increased from 22 million to 35.2 million in 2000, with immigration playing a key role.
- 🦘 The Hispanic foreign-born population grew at a faster rate than native Hispanics between 1990 and 2000; foreign-born Hispanics experienced an 81 percent increase compared to 50 percent for native Hispanics.
- 🦘 Overall, 40 percent of all Hispanics in the United States are foreign-born.

Hispanic Education (2002) and Personal Income (1998) compared to Whites and African Americans, Persons Aged 65+ (age adjusted),

Education	White	Black	Hispanic
0-8 years	14.5	27.2	53.2
9-11 years	13.6	23.7	12.9
12 years	36.4	26.1	21.3
13+ years	35.5	22.9	12.6
Median Personal \$	16,537	11,458	10,073



Our study's aims

- 🔥 Does the paradox also extend to the postponement of disability?
- 🔥 Are Hispanics' mortality advantages (relative to their minority status) brought about through the postponement of disease and disability?
- 🔥 Or....do Hispanics' socioeconomic disadvantages translate into more years of disabled life?

Data and Measures (1)

- Health and Retirement Survey, 1998-2004
 - Largest nationally representative sample of older persons 51 years of age and older
 - Blacks and Hispanics over-sampled
- Within-sample identification of race/ethnicity, health and mortality offers a number of methodological advantages in modeling ALE compared to prior studies based on multi-source data used to calculate occurrence/exposure rates
- Baseline sampling weights at the time of first interview. Normalized within race/ethnic group
- Race/ethnicity is self report
 - Whites: Rs who self identify as white and non-Hispanic
 - Blacks: Rs who self identify as black and non-Hispanic
 - Hispanics: Do you consider yourself Hispanic or Latino?

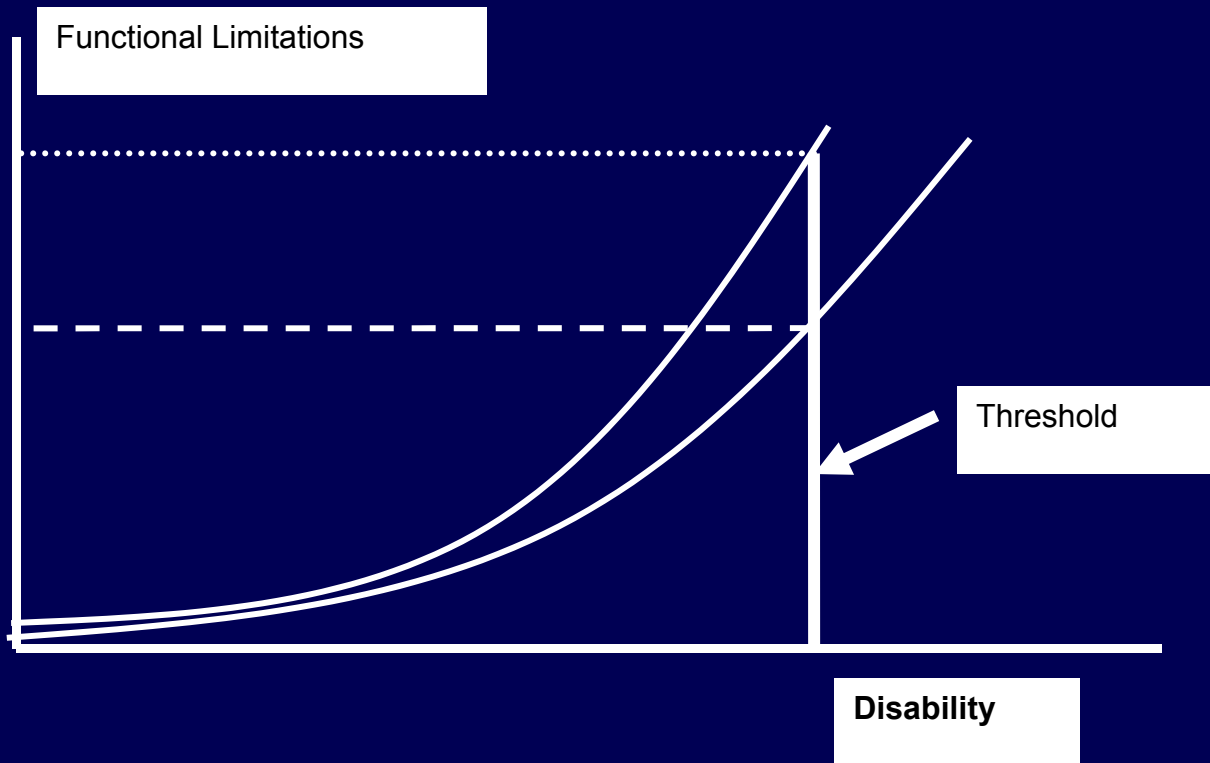
Data and Measures (2)

- 🦘 Why look at multiple metrics of disablement?
 - 🦘 Different levels of functional limitations may be needed to reach a disability “threshold”
 - 🦘 Different etiologies of disablement
 - 🦘 CVD-based versus physical “wear and tear”
 - 🦘 Mid-points vs. end-points due to differences in the probability of moving between disablement “stages”
 - 🦘 We also examine differences in global health (SRH) compared to specific functional problems or self-care

Mortality and health states

- 🐮 Age-specific mortality identified by NDI and supplemental information on vital status by HRS
- 🐮 ADL disability: because of a health or memory problem, do you have any difficulty...(1 or more of 5 items = “inactive”)
- 🐮 NAGI: because of a health problem, do you have any difficulty... (3 or more of 6 items = “inactive”)
- 🐮 SRH: Would you say your health is excellent, very good, good, fair, or poor? (poor = “inactive”)

Functional limitations and a disability threshold



Analytical Approach

- 🐮 IMaCh
- 🐮 Two-alive state space
- 🐮 Sex-specific models where race/ethnicity is a covariate (White, Black, Hispanic)
- 🐮 Assumes Gompertz functional form of relationship between age and the risk of each transition in the model



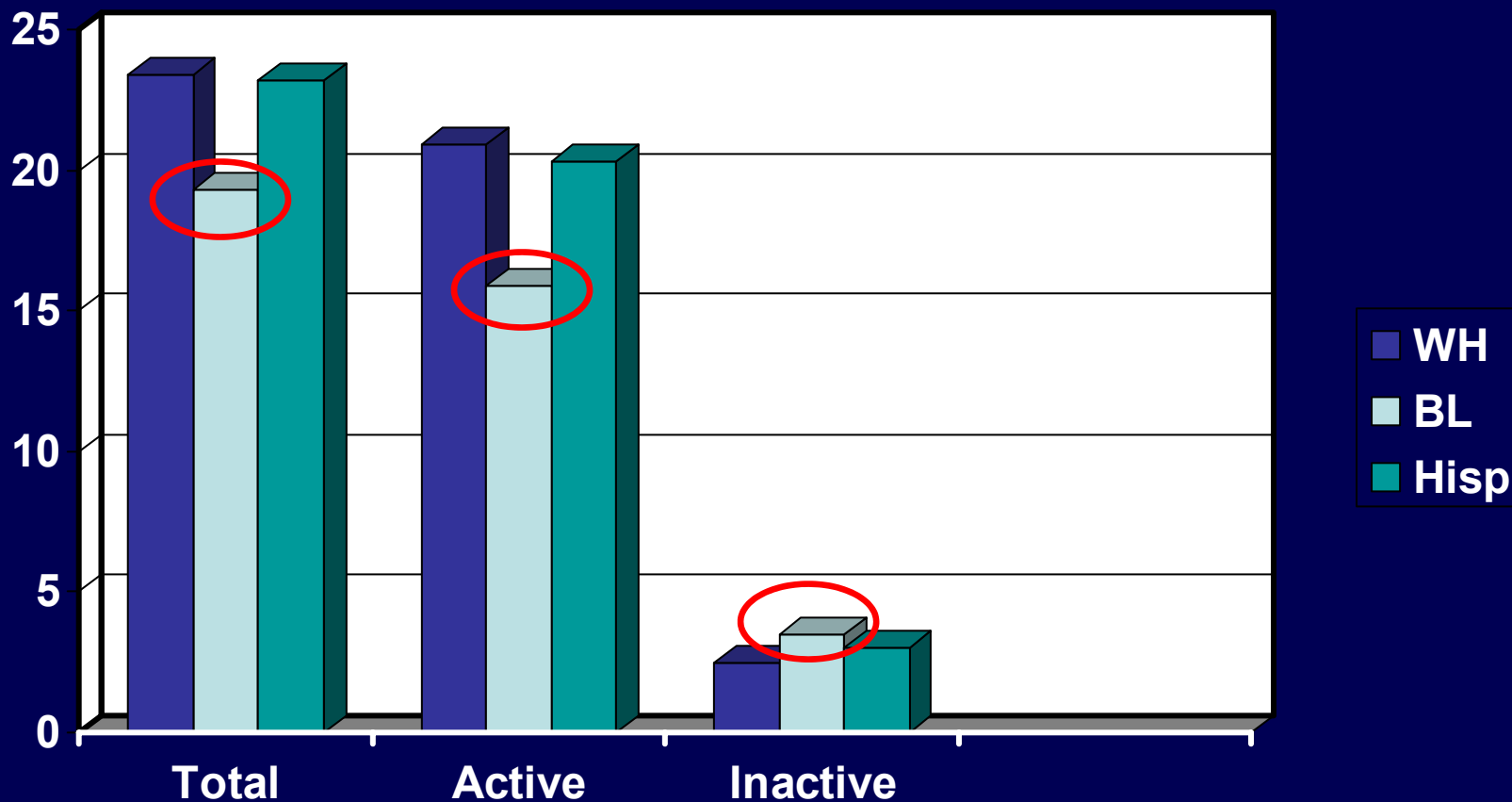
Relative risk of $P(x)_{ij}$ for Black & Hispanic Males (Whites = reference)

ADL	A→I	A→D	I→A	I→D
BI	1.36**	3.72**	.55**	.82
Hisp	1.10	.99	.82	.90
Nagi				
BI	1.16	1.66**	.65**	1.13
Hisp	1.04	.99	.99	1.03
SRH				
BL	1.65**	1.95**	1.02	.87
Hisp	1.95**	.81	1.08	1.01

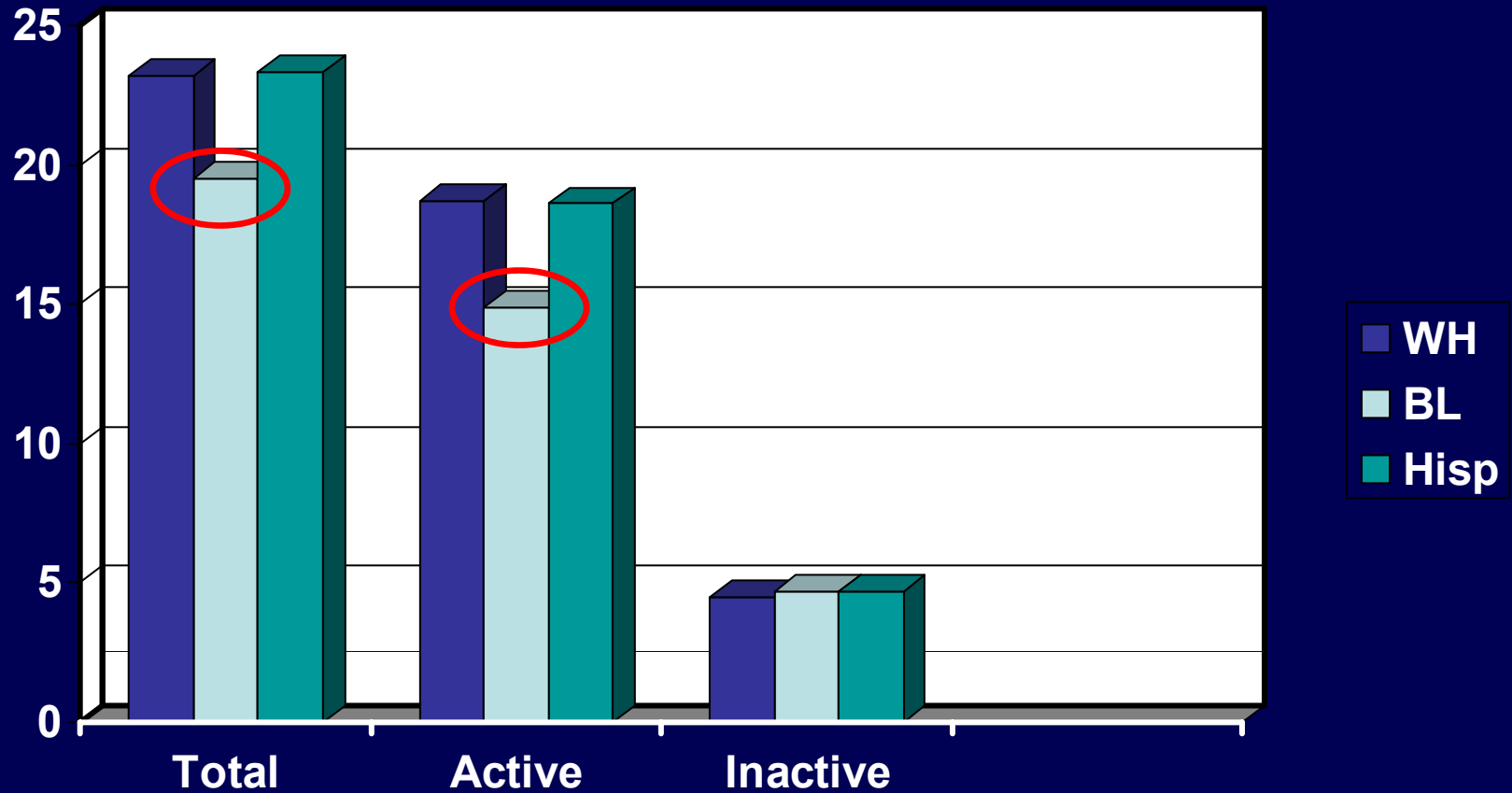
Relative risk of $P(x)_{ij}$ for Black & Hispanic Females (Whites = reference)

ADL	A→I	A→D	I→A	I→D
BI	1.73**	2.48**	.98**	.93
Hisp	1.82**	.96	.96	.90
Nagi				
BI	1.67**	3.13**	.91	1.15
Hisp	1.30*	.77	.90	1.13
SRH				
BL	2.03**	2.11**	1.16	.86
Hisp	2.39**	1.10	1.31	.66

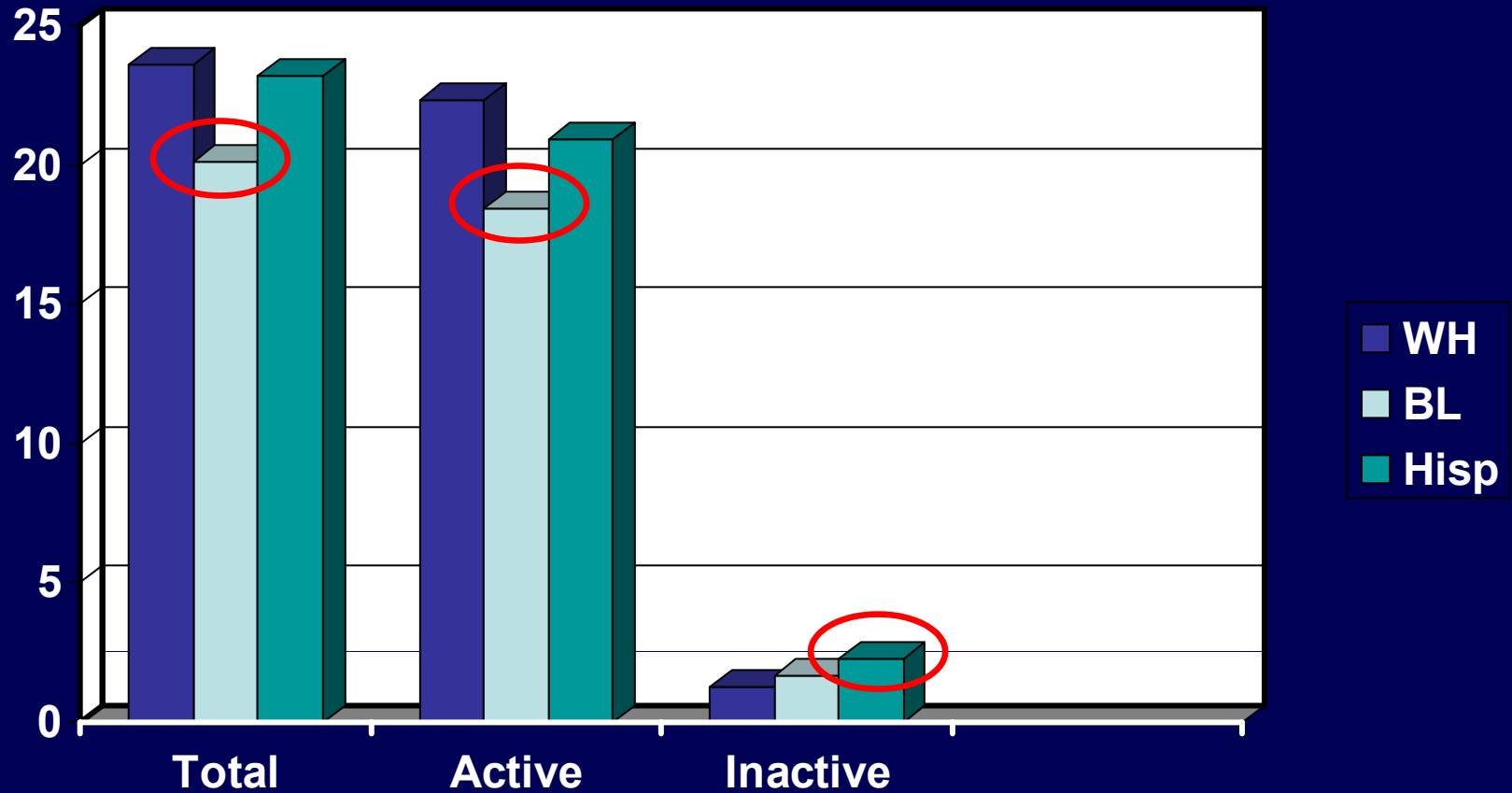
Race/ethnic differences in ADL-ALE at age 55, Males



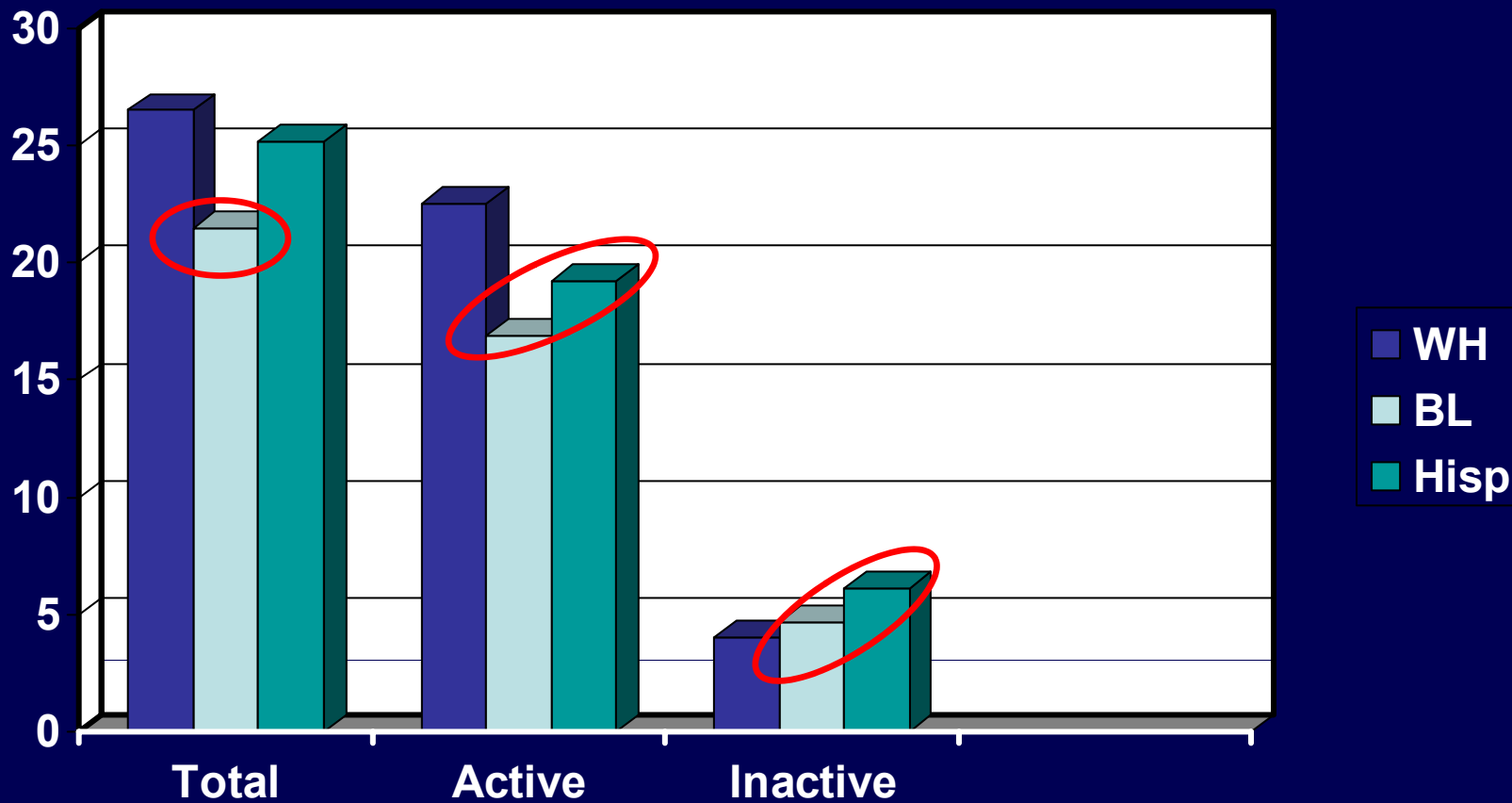
Race/ethnic differences in Nagi-ALE at age 55, Males



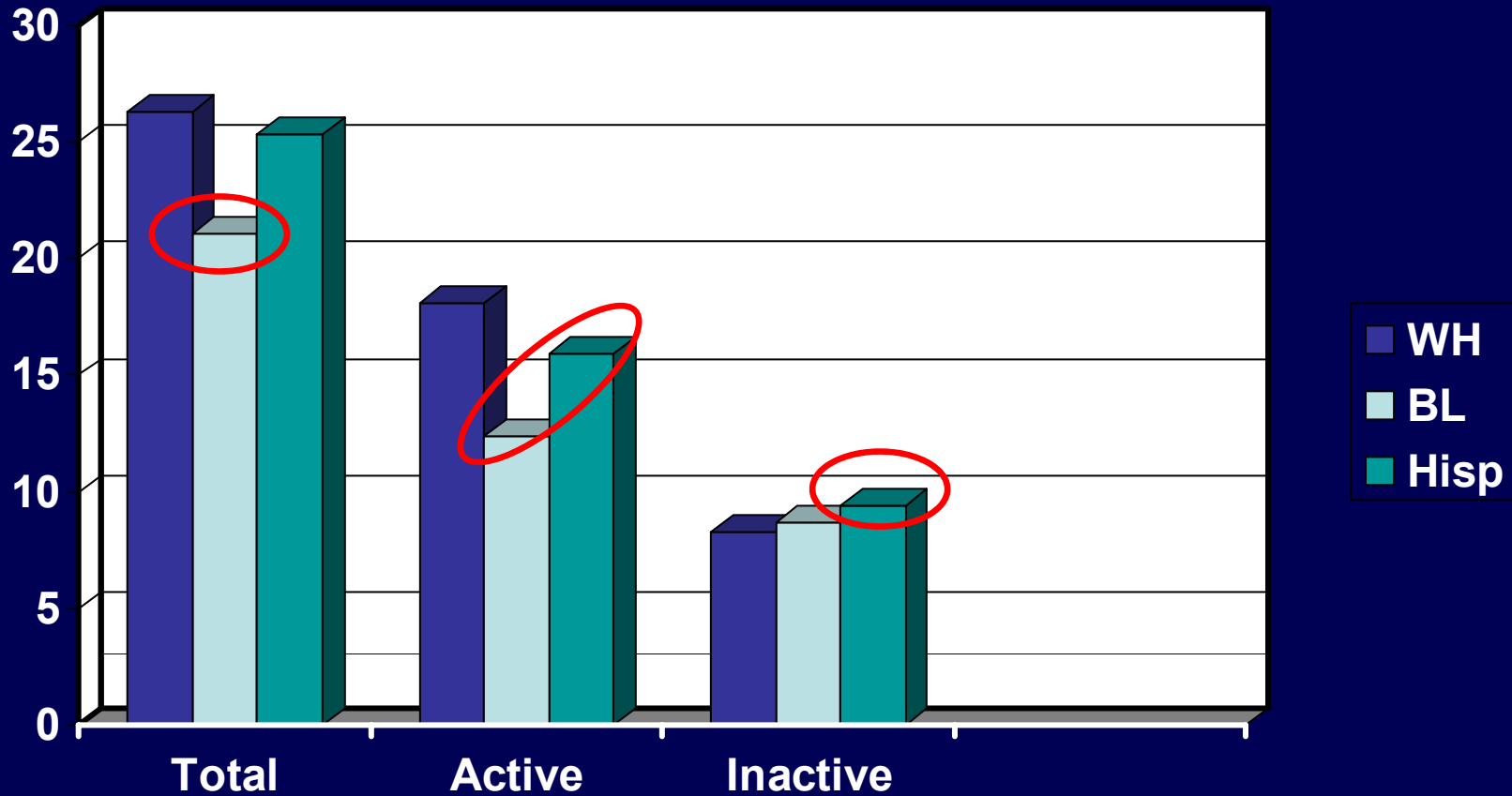
Race/ethnic differences in SRH-ALE at age 55, Males



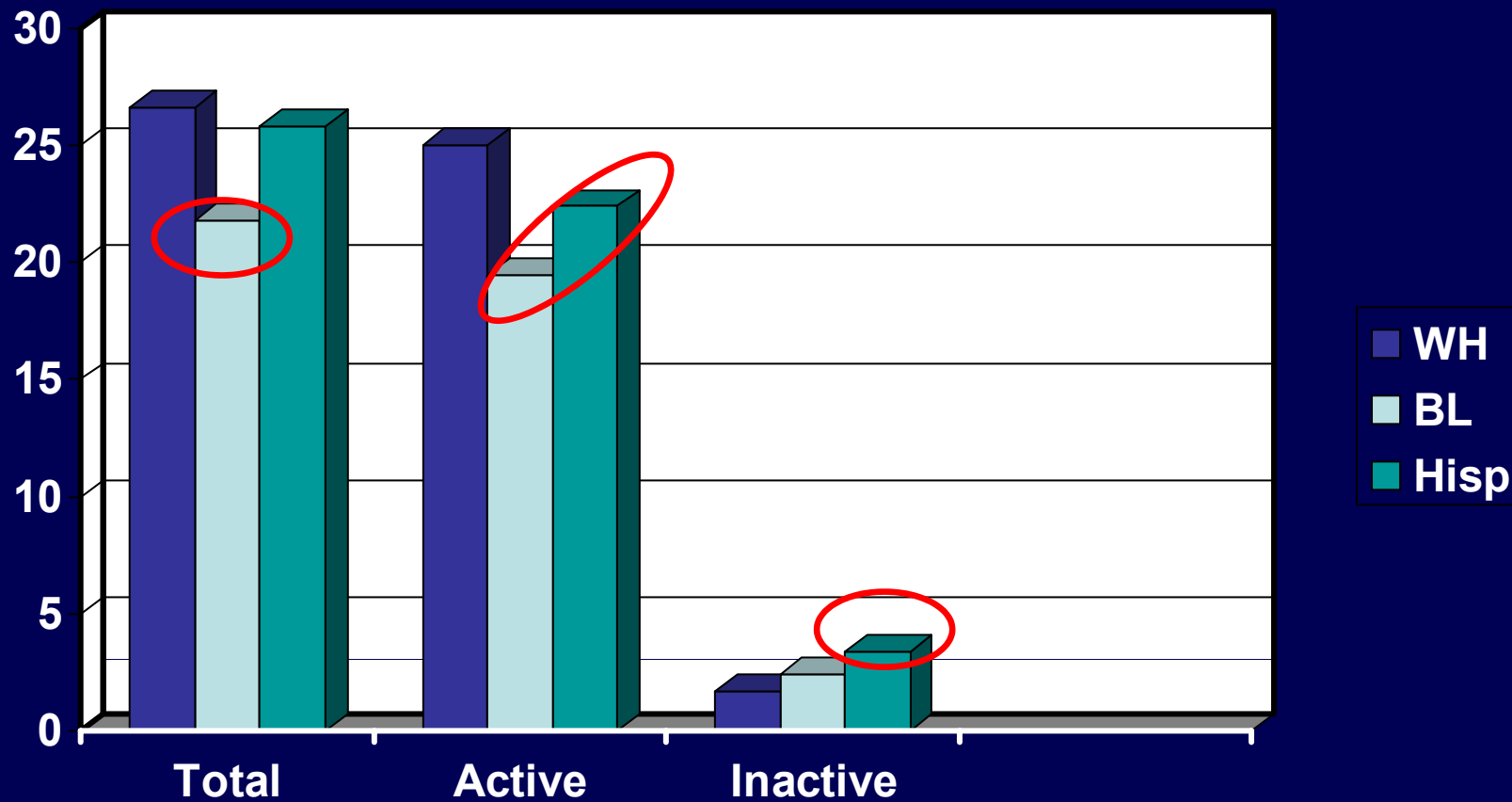
Race/ethnic differences in ADL-ALE at age 55, Females



Race/ethnic differences in Nagi-ALE at age 55, Females



Race/ethnic differences in SRH-ALE at age 55, Females



Tentative Conclusions

- Hispanic paradox in mortality appears to extend to disablement – especially for males
- Hispanic mortality advantages appears to reflect the postponement of disease and disability
- Among Hispanics, there is some evidence to suggest that women's functional health and disability are more sensitive to SES compared to men
- Hispanics' relatively lengthy SRH life expectancy is highly consistent with their low level of SES resources



POPULATION RESEARCH CENTER

The University of Texas at Austin