Sociocultural & Psychosocial Correlates of QoL Among Hispanic Prostate Cancer Survivors

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Prostate Cancer (PC)

- 2\textsuperscript{nd} leading cause of cancer-related death
- 1 in 6 will develop PC
- 5-year survival rates about 100%
- Surgery & radiation Tx are associated with significant decrements in disease-specific QoL
- Most commonly diagnosed cancer in Hispanic/Latino (HL) men
- 2\textsuperscript{nd} leading cause of cancer deaths in HL men

(American Cancer Society, 2007)
Relative to NHWs, Hispanic/Latino men treated for PC show:

- More advanced disease at diagnosis
- Less likely to achieve baseline functioning
- Poorer general and PC-specific QOL following treatment
- Less psychosocial resources?
HLs may engage in psychosocial processes that may render them at greater risk of experiencing poorer adjustment when faced with chronic diseases.

- Greater perceived stress & disease burden
- Less controllability
- Less assertiveness & emotional expression
- More fatalistic attitudes & hopelessness
- Greater avoidant coping
- Less motivation to adopt behavioral changes
- More reliance on the family
Psychosocial Factors Associated with Adjustment in Cancer Survivorship

(Variation Across Ethnic Groups?)

↑ Optimism (↑ fatalism)
Social Support (↑ family reliance)
Adaptive Coping (↑ avoidance)
Self-efficacy (↓ control)
Emotional Expression (↓ specific to Ca)
Stress Mngmnt. Skills

↓ Perceived Stress (↑ burden)
Illness-related disruption (↑ side effects)
Tx-related Worries (↑ fear, anxiety)
Negative Personality Traits

All Associated with Better Adjustment
(Psychosocial Disadvantage?)

(Eaton et al., 2001; Stommel et al., 2002; Bisson et al., 2002; Cliff et al., 2000; Fitch et al., 2000; Penedo et al., 2002, 2003, 2004)
Ethnic Differences Between Hispanics & Non-Hispanic Whites One-year Post-Treatment for Localized Prostate Cancer
Optimism

N=225  (104 HLs, 110 NHWs)
Stage I/II
Radiation or Surgery
Variable SES, Accul & Yrs. in US

* p < .05
Controlling for age, education, Tx, SES
Emotional Suppression

Hispanics: 19*
Non-Hispanic Whites: 16

*p < .05
Controlling for age, education, Tx, SES
Tangible Social Support

Hispanics  Non-Hispanic Whites

7 * 9

*p < .05
Controlling for age, education, Tx, SES
Differences in Quality of Life

General

- Hispanics: 82*
- Non-Hispanic Whites: 92

Social

- Hispanics: 19*
- Non-Hispanic Whites: 21

Emotional

- Hispanics: 19*
- Non-Hispanic Whites: 21

* p < .05

Controlling for age, education, Tx, SES
Prostate Cancer-Specific QOL

Sexual Desire

- Hispanics: 1.5
- Non-Hispanic Whites: 2.6

Urinary Continence

- Hispanics: 0.8
- Non-Hispanic Whites: 1.2

Ability to Orgasm

- Hispanics: 1.1
- Non-Hispanic Whites: 1.7

Functional Well-Being

- Hispanics: 19
- Non-Hispanic Whites: 23

*p < .05  Controlling for age, education, Tx, SES
Health Behaviors Explain Ethnic Differences in QOL in PC Survivors

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
<th>Step 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnic contrast 1 (non-Hispanic white vs. African American)</td>
<td>-0.19*</td>
<td>-0.12</td>
<td>-0.08</td>
<td>-0.04</td>
</tr>
<tr>
<td>Ethnic contrast 2 (non-Hispanic white vs. Hispanic)</td>
<td>-0.35†</td>
<td>-0.22*</td>
<td>-0.21*</td>
<td>-0.13‡</td>
</tr>
<tr>
<td>Block 2</td>
<td></td>
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<tr>
<td>Age</td>
<td>0.06</td>
<td>0.08</td>
<td>0.03</td>
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<tr>
<td>Year in school</td>
<td>0.10</td>
<td>0.12†</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>Household income</td>
<td>0.20*</td>
<td>0.16§</td>
<td>0.08</td>
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<tr>
<td>Block 3</td>
<td></td>
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</tr>
<tr>
<td>Type of procedure</td>
<td>-0.05</td>
<td>-0.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical comorbidity</td>
<td>-0.21*</td>
<td>-0.13§</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Months since diagnosis</td>
<td>-0.06</td>
<td>-0.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Months since treatment</td>
<td>0.11</td>
<td>0.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body mass index</td>
<td>-0.02</td>
<td>0.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Block 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dietary habit</td>
<td></td>
<td></td>
<td>0.02</td>
<td></td>
</tr>
<tr>
<td>Physical activity</td>
<td></td>
<td></td>
<td>0.16§</td>
<td></td>
</tr>
<tr>
<td>Sleep functioning</td>
<td></td>
<td></td>
<td>-0.41‡</td>
<td></td>
</tr>
<tr>
<td>Alcohol consumption</td>
<td></td>
<td></td>
<td>-0.02</td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>0.11†</td>
<td>0.15§4</td>
<td>0.20</td>
<td>0.37</td>
</tr>
<tr>
<td>Increase in R² from previous step</td>
<td>0.11†</td>
<td>0.05*</td>
<td>0.05§</td>
<td>0.17†</td>
</tr>
</tbody>
</table>

* P < 0.01
† P < 0.001
‡ P < 0.10
§ P < 0.05

(Penedo et al., 2006)
Health Behaviors Explain Ethnic Differences in QOL in PC Survivors

Ethnic Group Membership

Physical Activity
  Sleep
  Coping
  Optimism

Quality of Life

(e.g., Penedo et al., 2006)
Evidence that HL PC survivors may be at a psychosocial disadvantage

Greater compromises in multiple QOL domains

Several mechanisms can explain observed compromises in HL

Sample was diverse in SES & acculturation
Psychosocial Intervention in Multi-ethnic Prostate Cancer Survivors
Cognitive Behavioral Stress Management (CBSM) in Localized PC

- Stress Awareness
- Anxiety Reduction
- Δ Cognitive Appraisals
- Coping & Emotional Expression
- Social Support
- Communication
- Health Behaviors
- Endocrine Regulation
- Immune Regulation
- QoL & Physical Health

CBSM

- Group-based
- 10-sessions
- 4-6 part.
- 2 co-leaders
- Relaxation
- Stress Mngmnt.
- PC Concerns
- 40% HL

(Schneiderman et al., 1989; Antoni et al., 1999, 2000; Penedo et al., 2008)
Group-Based Cognitive Behavioral Stress Management (CBSM) Intervention in Localized PC has shown:

- Improvements in QoL
- Enhanced stress management skills
- Increased adaptive coping
- Increased benefit finding
- Improvements in mood

Clinically significant improvements in:
  - sexual function
  - emotional well-being
  (for anxious, socially inhibited & stressed)

- Buffered declines in NKCC

N=260; Acceptance Rate ≈ 10%; Attendance & Retention > 80%
Can our CBSM intervention for localized PC be linguistically & culturally adapted for Spanish Monolingual HL PC Survivors?
Culturally Sensitive Psychosocial Intervention

Conceptual Model of Indirect Pathways Between Ethnicity and QOL Outcomes in Cancer

- Cultural Factors
- Ethnic Identity
- Minority Status
- Acculturation

Ethnicity

QoL & Adjustment

Physical Function

Culturally Sensitive Psychosocial Intervention

Emot Express. Coping Social Support Appraisals

Negative Affect Positive Growth Health Behaviors

(Adapted from Myerowitz et al., '98 & Phinney, 1996)
<table>
<thead>
<tr>
<th>Cultural Factor</th>
<th>Culture-Specific Definition</th>
<th>Implication</th>
<th>Therapy Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allocentrism</td>
<td>Needs and objectives of the group over individual</td>
<td>High level of personal interdependence, conformity</td>
<td>Foster + family interaction</td>
</tr>
<tr>
<td>Simpatia</td>
<td>Pleasant and non-confrontational social interactions</td>
<td>Avoid interpersonal conflict; &amp; confrontation; socially desirable responses.</td>
<td>Assertive Training</td>
</tr>
<tr>
<td>Familialism</td>
<td>Strong attachment to nuclear and extended family</td>
<td>Provide tangible and emotional support to family</td>
<td>+ Health Benefits the group</td>
</tr>
<tr>
<td>Power Distance</td>
<td>Powerful individuals</td>
<td>Acknowledgement of personal power in social contexts</td>
<td>Empower Comm. Skills</td>
</tr>
<tr>
<td>Personal Space</td>
<td>Amount of physical space considered appropriate between individuals</td>
<td>Perceive close distance as appropriate in social situations</td>
<td>↑Interpers Skills Training</td>
</tr>
<tr>
<td>Time Orientation</td>
<td>Present oriented.</td>
<td>Emphasis on quality of interaction, not time</td>
<td>Flexibility ↑ Info. Respeto</td>
</tr>
<tr>
<td>Gender Roles</td>
<td>Male dominance, female submissiveness</td>
<td>Lack of consistent evidence supporting this value</td>
<td>Couple’s Disease</td>
</tr>
</tbody>
</table>
Adapting the CBSM Intervention for Spanish Monolingual Men

Groups 1-4
- Project Leader (1)
- Interventionists (2)
- Physicians (2)
- Nurses (2)
- Social Workers (2)
- Case Managers (2)

Groups 5-8
- Project Leader
- Interventionists
- Pr Ca Surv (10)

Groups 9-12
- Project Leader
- Interventionists
- Physicians
- Nurses
- Social Workers
- Case Managers
- Pr Ca Surv

(Duran, 2000)
Pre- to Post-Intervention Changes in Physical Well Being by Group Assignment

\[ F(4,65) = 8.5, \ p < .001^a \]

\(^a\) F Value for final regression model including relevant covariates and group assignment.
- Change in physical well being from pre-intervention to post-intervention for the experimental and control conditions.

Penedo et al., 2008
Pre- to Post-Intervention Changes in Emotional Well Being by Group Assignment

$F(3, 67) = 7.3, p < .001^a$

$^a$ F Value for final regression model including relevant covariates and group assignment. Change in emotional well being from pre-intervention to post-intervention for the experimental and control conditions.

Penedo et al., 2008
Pre- to Post-Intervention Changes in Sexual Functioning by Group Assignment

\[ F(2,68) = 69.5, \ p < .001^a \]

\(^a\) F Value for final regression model including group assignment.

Change in sexual functioning from pre-intervention to post-intervention for the experimental and control conditions.

Penedo et al., 2008
Multiple Determinants of QoL & Health Outcomes in Ethnic Minority PC Survivors
PATHS Study
Prostate Cancer Assessment & Treatment Health Study

- Prospective observational study, N=450
- 150 Hispanic, 150 Af Am & 150 Non-Hispanic White
- Newly diagnosed (within 3 months) & prior to treatment or active surveillance (within 3 months)
- 2-year follow-up
- Psychosocial assessment, saliva & blood
- English & Spanish
- Paid $250
Lifespan Biopsychosocial Model of Cumulative Vulnerability & Minority Health

Fig. 1 This is a reciprocal and recursive model of the complex relationships between race/ethnicity and SES on psychosocial adversities, reserve capacity and cumulative vulnerabilities in predicting health status over the lifespan. The model posits that race/ethnicity and SES history interact (path A) over the lifespan to predict health outcomes by shaping exposure to psychosocial adversities (path B) through cognitive-emotional (path D), behavioral (paths E, H & L), and biological pathways (paths F, M, N & O). The model also hypothesizes that race/ethnicity’s and SES history’s effects on health are mediated through Reserve Capacity (paths A, B, P, I, K), which also affects cognitive-emotional processing, and that health behaviors, health care access and utilization and allostatic load lead to the development of cumulative biopsychosocial vulnerabilities (paths P, Q, R, S, Q, T and U), and these, in turn, ultimately predict health status (path V) over the lifecourse.

(Myers, 2009)
Ethnic Differences at Diagnosis/Pre-Treatment

Active Coping

- Hispanics: 4*
- Non-Hispanic Whites: 6

Planning

- Hispanics: 3*
- Non-Hispanic Whites: 6

Adaptive Coping Composite

- Hispanics: 9*
- Non-Hispanic Whites: 12

*p < .05
Ethnic Differences at Diagnosis/Pre-Treatment

Urinary Continence

- Hispanics: 84*
- Non-Hispanic Whites: 93

Urinary Function

- Hispanics: 83*
- Non-Hispanic Whites: 92

Physical QOL

- Hispanics: 24*
- Non-Hispanic Whites: 27

*p < .05
Ethnic Differences at Diagnosis/Pre-Treatment

**Medical Mistrust**
- Hispanics: 26*  
- Non-Hispanic Whites: 21

**Simpatia/Agreeableness**
- Hispanics: 21*  
- Non-Hispanic Whites: 19

**Familism**
- Hispanics: 48*  
- Non-Hispanic Whites: 43

*p < .05
Acculturation at Diagnosis

↑ Acculturation

↑ General QOL

↑ Functional Well Being

↓ Simpatia (Agreeableness)

↓ Distrust

All p’s < .05
Greater Cancer Fatalism

Less Religious Coping & Spirituality

Greater Avoidant Coping

Greater Cortisol AUC

Controlling for age, co-morbidities, time since Dx, time since Tx

* All p’s < .05
Components of Ethnicity

Acculturation
Ethnic identity
Cultural values
Perceived discrimination

Psychosocial
Optimism
Social support
Coping
Health behaviors
Stress

Neuroendocrine & Immune
Salivary Cortisol
CD4/CD8 Cells
Th1/Th2 Cytokines
Proinflammatory Cytokines
Angiogenic Cytokines

Socio-demographic
Age, education, income
Marital status/living arrangement, access to care

Healthcare
PCa knowledge
Attitudes & beliefs
Health care access/use

Medical
Disease-related
Physical health
Treatment adherence

General & PCa-Specific QOL & Disease Activity
Medical Mistrust Mediates the Relationship Between Ethnicity & Depression

Ethnic Group Membership → Medical Mistrust → CES-D Depression

(Bustillo, Penedo et al., 2010)
Some Conclusions…

- Hispanic cancer survivors may be at a psychosocial disadvantage
- Very limited work despite a growing number of Hispanic cancer survivors and focus on biobehavioral mechanisms in overall adjustment and health outcomes
- Psychosocial interventions can positively impact adjustment but mostly limited to non-minority samples
- Some evidence suggests successful delivery in ethnic minorities but need more information on specific sociocultural mechanisms/processes
- PC can serves as one of many models
Challenges

- Complex models, interactions across multiple domains
- Heterogeneity—biological, psych, socio/cultural
- Effects are not all detrimental—reserve capacity
- Risk of “stereotyping” by cultural processes
- Very limited work on targeted interventions
- Community-based approaches are lacking
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