Diabetes, Disease Management, and Disability: Perspectives from a Diverse Population of Diabetics

Tammy Tom & Christy M. Nishita
Center on Disability Studies, University of Hawaii at Manoa
November 8, 2009, American Public Health Association, Philadelphia, PA

Background
Although culture may play a role in how individuals with diabetes participate in their disease management, it is possible that across ethnic backgrounds similar beliefs regarding support needs and disease perceptions provide a foundation for cross-cultural program and policy development. We tapped into a racially diverse group of diabetics participating in an existing research study to examine this topic.

Research Questions
(1) Do beliefs about the need for diabetes management supports differ among diabetics from different ethnic backgrounds?
(2) Do beliefs about whether diabetes will affect future functioning or employment differ among diabetics from different ethnic backgrounds?

Methods

- Sample
  - 190 adults enrolled in the Hawaii Demonstration to Maintain Independence & Employment
  - Pros: Ethnic diversity; Access to existing study data
  - Cons: Convenience sample → Limits generalizability

- Data Collection
  - Questions added to existing study survey
  - Mail survey with mail/email/phone follow-up
  - 156 responses (82%)

- Analyses
  - Chi-square to examine similarities/differences in responses (independence/dependence of ethnicity/race and response)
  - Priority given to NHPI races (part or full). Any other individuals of mixed race categorized as Other.
  - Adequate Chi-square cell counts influenced category development – particularly Asians into Japanese and Other Asian (Chinese, Filipino, those of mixed Asian heritage).

Results
1. Believe they need support to achieve specific disease management behaviors:
   Responses similar across ethnicity/race
   - Maintain a healthy weight: 74% (p-value = 0.21)
   - Maintain healthy blood glucose levels: 74% (p-value = 0.97)
   - Exercise regularly: 66% (p-value = 0.49)
   - Maintain healthy cholesterol levels: 57% (p-value = 0.89)
   - Manage stress: 55% (p-value = 0.59)
   - Maintain a healthy blood pressure: 48% (p-value = 0.53)
   - See a healthcare professional regularly: 31% (p-value = 0.66)
   - Take medication as prescribed: 22% (p-value = 0.98)
   - Get a flu shot every year: 17% (p-value = 0.50)
   - Not smoke: 6% (p-value = 0.68)

   /1 The list of behaviors on the survey mirrored Centers for Disease Control diabetes self-management recommendations

2. Believe diabetes will affect their future functioning or employment:
   Responses similar across ethnicity/race
   - (p-value = 0.81)

Discussion
Across ethnic backgrounds, beliefs about support needs and the effect diabetes may have on future functioning/employment were similar. Results represent the views of a diverse population of diabetics and could be used for cross-cultural policy and program development. Additional research could include surveying American Indian/Alaska Native, Black, and Hispanics who were not well represented in this sample. Examining what diabetics believe they need and the services they actually use warrants further investigation.

Contact Information:
Tammy Tom  tammy.tom@hawaii.edu  (808) 955-9039
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/1 This poster is a side study of a federally funded RCT in progress (2007-2010). Study eligibility includes: diabetes diagnosis or 6.5+ A1c; 18 to 62 yrs old; working 10+ hrs/wk; min. wage+; living on Oahu; not receiving SSI or SSDI.

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### Respondent Characteristics

<table>
<thead>
<tr>
<th>Diabetes Type</th>
<th>Gender</th>
<th>Years since diagnosis</th>
<th>Education</th>
<th>Body Mass Index (BMI)</th>
<th>2007 Annual Earnings</th>
<th>Healthcare Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 2: 88%</td>
<td>Female: 65%</td>
<td>Mean: 8 yrs</td>
<td>Bachelor’s degree or higher: 54%</td>
<td>Mean: 33</td>
<td>Mean: $42K</td>
<td>Insured: 99%</td>
</tr>
</tbody>
</table>

### Results

#### 1. Believe they need support to achieve specific disease management behaviors

<table>
<thead>
<tr>
<th>Behavior</th>
<th>All races</th>
<th>p-value</th>
</tr>
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Responses similar across ethnicity/race

#### 2. Believe diabetes will affect their future functioning or employment

<table>
<thead>
<tr>
<th>Ethnicity/Race</th>
<th>NHPI</th>
<th>Japanese</th>
<th>Other Asian</th>
<th>White</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native Hawaiian/Pacific Islander*</td>
<td>64%</td>
<td>58%</td>
<td>58%</td>
<td>50%</td>
<td>55%</td>
</tr>
<tr>
<td>Other 12%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White 17%</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Other Asian 17%</td>
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