The Knowing-Doing Gap in Advance Directives in Asian Americans: The Role of Education and Acculturation

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Advance Directives (ADs)

• Written documents that allow individuals to express their preferences for medical treatment in the event that they become incapable of making their own decisions
• AD completion rate of the U.S. general population: 26% to 36%

• Underutilization in racial/ethnic minorities

• Paucity of information on Asian Americans – limited generalizability in existing findings
Distribution of U.S. Population by Race/Ethnicity, 2010

- White, Non-Hispanic: 64%
- Hispanic: 16%
- Black, Non-Hispanic: 12%
- American Indian/Alaska Native: 1%
- Asian: 5%
- Some Other Race: 0.2%
- Native Hawaiian and Other Pacific Islander: 0.2%
- Two or More Races: 2%

Total U.S. Population = 308.7 million

SOURCE: 2010 U.S. Census
Growth Rate of the U.S. Population: 2000–2010

Source: 2010 U.S. Census
The Knowledge and Behavior Gap

AD Knowledge → AD Completion
The Role of Education and Acculturation

- Education
- AD Knowledge
- AD Completion
- Acculturation

Diagram shows the interconnections between education, AD knowledge, AD completion, and acculturation.
Research Aim

(1) to explore the AD completion rate in a sample of Asian Americans

(2) to examine the direct and moderating effects of knowledge of AD, education, and acculturation in predicting AD completion
AAQoL Survey

• Target population: Asian American residents in Austin (aged 18+)
Link available at https://www.austintexas.gov/department/aaqol
Culturally and Linguistically Sensitive Approach

• Asian language versions of the survey

• Research personnel (e.g., recruiter and survey assistant) who share the same culture and language of the target population

• Community partnerships
Survey Questionnaire

• English
• Chinese (traditional and simplified versions)
• Korean
• Vietnamese
• Hindi
• Gujarati
• Tagalog
• Survey Data Collection
  – August to December, 2015

• Final Sample Size = 2,609
Total Sample Size = 2,609

• 640 Chinese
• 574 Asian Indians
• 471 Koreans
• 513 Vietnamese
• 265 Filipinos
• 146 Asians of other ethnic backgrounds
## Survey Language

<table>
<thead>
<tr>
<th>Survey language</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>1,345</td>
<td>51.5</td>
</tr>
<tr>
<td>Traditional Chinese</td>
<td>215</td>
<td>8.2</td>
</tr>
<tr>
<td>Simplified Chinese</td>
<td>229</td>
<td>8.8</td>
</tr>
<tr>
<td>Korean</td>
<td>371</td>
<td>14.2</td>
</tr>
<tr>
<td>Vietnamese</td>
<td>365</td>
<td>14.0</td>
</tr>
<tr>
<td>Hindi</td>
<td>12</td>
<td>0.5</td>
</tr>
<tr>
<td>Gujarati</td>
<td>58</td>
<td>2.2</td>
</tr>
<tr>
<td>Tagalog</td>
<td>14</td>
<td>0.5</td>
</tr>
</tbody>
</table>
Sample Characteristics

• Age:
  – 18-39: 49%
  – 40-59: 31.1%
  – 60 and older: 19.9%
• Female: 55.2%
• Not married: 33.4%
• Financial insecurity: 17.2%
• Fair/poor health: 10.6%
• Foreign-born: 90.6%
• Education
  – Low (≤ 12 years): 18.4%
  – High (> 12 years): 81.6%

• Acculturation
  – Low (very low/low): 32.6%
  – High (high/very high): 67.4%
• AD Knowledge
  – No: 81.6%
  – Yes: 18.4%

• AD Completion
  – No: 88.2%
  – Yes: 11.8%
Spearman Rank-order Correlation

• AD Knowledge and completion:

\[ r_s = 0.39, \ p < 0.001 \]
## Logistic Regression Model of AD Completion

<table>
<thead>
<tr>
<th></th>
<th>Odds Ratio (95% Confidence Interval)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge of ADs (reference no)</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>8.67*** (6.41–11.7)</td>
</tr>
<tr>
<td></td>
<td>4.63** (2.07–10.3)</td>
</tr>
<tr>
<td>Education (reference low)</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>0.72 (0.48–1.07)</td>
</tr>
<tr>
<td></td>
<td>0.63 (0.40–1.02)</td>
</tr>
<tr>
<td>Acculturation (reference low)</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>2.04*** (1.50–3.30)</td>
</tr>
<tr>
<td></td>
<td>1.90* (1.16–3.11)</td>
</tr>
<tr>
<td>Knowledge of ADs × Education</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>2.41* (1.08–5.38)</td>
</tr>
<tr>
<td>Knowledge of ADs × Acculturation</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>1.12 (0.54–2.34)</td>
</tr>
</tbody>
</table>

* * p < .05. ** p < .01. *** p < .001.

Demographic and background variables were controlled.
The Effect of AD Knowledge on Completion

• Low Education Group
  
  – OR = 4.35***
  – 95% CI = 2.31-8.14

• High Education Group
  
  – OR = 13.2***
  – 95% CI = 9.69-17.9
Discussion

• Low rate of AD completion (12%)
  – Particularly low in Koreans (5.6%) and younger adult group (5.8%)

• Discordance between knowing and doing – Knowledge in itself is not sufficient to enable individuals to make an appropriate action.
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• Discordance between knowing and doing – Knowledge in itself is not sufficient to enable individuals to make an appropriate action.
Education as a Moderator

• Education serves as a critical facilitator or enabler toward the action of AD completion.

• Education may help individuals better understand not only the concept of ADs but also the procedures involved in AD completion.

• Education may offer confidence and ability to engage in personal medical decision-making.
Limitations and Future Directions

• Cross-sectional design
• Non-representative and regionally-defined sample
• A single-item measure of acculturation

• Implications for services, programs, and policies
  – Identification of subgroups to be prioritized and areas to be targeted
Data collection for the project was funded by the City of Austin’s Asian American Quality of Life initiative (Contract No. 26-8275-39, PI–Yuri Jang, Ph.D.).