Prostate cancer occurs more frequently in African-American men, is at more advanced stages at the time of diagnosis, and results in death at more than twice the rate than that of white men. The American Cancer Society (2006) reported the national incidence and mortality rates of prostate cancer for the years 1997 to 2001. Black men had both a higher incidence (274.3/100,000) and mortality (70.4/100,000) than did white men (171.2/100,000; 28.8/100,000). The Florida Cancer Data System (2004) provided incidence data for Miami-Dade County for the year 2004 by age divisions; the incidence for black men peaked between the ages of 65 to 69 (997.2/100,000) and for white men at age 70 to 74 (568.3/100,000). Nationally, the likelihood of presenting with advanced prostate cancer is approximately 5%, but in Florida black men are four times more likely to present with advanced stages of cancer (16%) than whites (3.8%) (Anai et al., 2006; Jemal et al., 2006). Both nationally and in Florida, the mortality rate for prostate cancer for black men was 2.5 times higher than for white men (Centers for Disease Control and Prevention, 2002; Jemal et al., 2006).

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The research instrument was used with permission of the authors Arleen Fearing, EdD, RN; Marguerite Riley, PhD, RN; Sharon Lambert, DNSc, RN; and Doris Bell, PhD, RN. The original instrument may be obtained by contacting Dr. Fearing at RFear2@aol.com

Note: The English, Haitian French, and Haitian Creole translation of the Prostate Health Questionnaire may be obtained at no cost by contacting Dr. Kleier, 611 NW 70th Terrace, Plantation, FL 33317; Phone: 954-583-7718; E-mail: jkleier@mail.barry.edu.

Language Adaptation and Testing Of the Prostate Health Questionnaire for Jamaican And Haitian Men

Jo Ann Kleier

A convenience sample of Jamaican and Haitian men completed the translated versions of the Prostate Health Questionnaire. The findings support that the translated survey is comprehensible, has internal consistency, and is reliable over time when used for these populations.

Introduction
The purpose of this study was to evaluate the utility of the translation of the Prostate Health Questionnaire for Jamaican and Haitian Men into their native tongues. This has the potential to significantly impact the ability to screen these groups for a disease for which they are particularly high risk. Currently no tool specific to these populations exists.

Objective
This study aimed to create accurate translations of the questionnaire in the study population’s native dialect, via the use of native translators and subsequent testing for consistency and reliability.

Method
The tool was translated by following guidelines from the National Institute of Child Health and Human Development. Using two teams, the tool was translated in the desired dialects. These versions were then tested twice on men who live in Miami-Dade County, both for accuracy of meaning of the translation and the cultural appropriateness.

Results
Both tested populations demonstrated that the adapted tool has high test-retest reliability and is internally consistent for the populations tested.

Conclusions
The adapted tool provides a vehicle to establish individual risk for the designated populations. It also serves as an indicator for the need for research tools to be translated into specific dialects, in order to accurately capture the risks or health care beliefs of particular groups.
Florida Prostate Cancer Task Force Report, 2000; Kuruvilla et al., 2001; National Cancer Institute, 2002).

CANCER Mondial International Agency for Research on Cancer (2002) reported the cases, prevalence, and mortality from prostate cancer for the Caribbean countries. At an incidence of 9,154/100,000 and a mortality of 4,935/100,000, African-Caribbean men suffer one of the highest rates of prostate cancer in the world. Jamaica had 473/100,000 cases and 259/100,000 deaths; Haiti had 767/100,000 cases with mortality of 403/100,000. Primarily due to the prevalence of infectious diseases, the life expectancy for a man living in Haiti is only about 50 years with only 8.4% of the men expected to live past 60 years of age (World Health Organization [WHO], 2005). Therefore, few men living in Haiti survive into the age associated with increased risk of prostate cancer. However, for Haitian men relocating from Haiti to the United States, the life expectancy is extended by 19 years (WHO, 1995), thereby giving Haitian-born men living in the United States the opportunity to experience age-related prostate changes. Clearly both Jamaican and Haitian men are at high risk for developing prostate cancer and then dying from the disease.

Background

Much of the work done to determine the knowledge, beliefs, perceptions, and practices regarding prostate cancer has been conducted on the broad population pool of African-American men (Boyd, Weinrich, Weinrich, & Norton, 2001; Fearing, Bell, Newton, & Lambert, 2000; Moul, 2000; Price, Colvin, & Smith, 1993; Shelton, Weinrich, & Reynolds, 1999; Smith, DeHaven, Grundig, & Wilson, 1997; Stallings et al., 2000; Thomas et al., 1999; Weinrich, Reynolds, Tingen, & Star, 2000). However, not all black men of African heritage living in the United States identify themselves as African-American.

Four studies using qualitative methodology (Hooper, 1998; Kleier, 2004; New York Task Force on Immigrant Health, 2001; Papadopoulos & Lees, 2002) to explore beliefs and practices in African-Caribbean men were found. These studies collectively reported that the participants lacked knowledge of prostate cancer and had misconceptions regarding the causes of the disease. They did not participate in screening, and when they did experience symptoms indicative of obstructive uropathy, they either did not recognize the significance of the symptoms or were reluctant to have them evaluated. Qualitative methodology is engagement intensive and so is limited to small numbers of participants; it is difficult to survey the large numbers of participants necessary to generalize findings (Kleier, 2003). Moreover, Kleier (2004) found Haitian men to be extremely reluctant to participate in one-on-one interviews on the topic of prostate cancer.

No studies were found which quantitatively measured African-Caribbean men’s beliefs about prostate cancer. Furthermore, no standardized instrument has been developed or adapted to test African-Caribbean men’s knowledge, beliefs, perceptions, and practices concerning prostate cancer. The purpose of this study was to adapt and test a language-appropriate instrument for measuring questions regarding prostate cancer among specific groups of black men, those from Jamaica and Haiti.

Table 1. Demographic Questions

<table>
<thead>
<tr>
<th>Number</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>What is your present age?</td>
</tr>
<tr>
<td>2.</td>
<td>In what country were you born?</td>
</tr>
<tr>
<td>3.</td>
<td>Approximately how many years have you been living in the United States?</td>
</tr>
<tr>
<td>4.</td>
<td>How would you describe your marital status?</td>
</tr>
<tr>
<td>5.</td>
<td>What is the highest level of education you have completed?</td>
</tr>
<tr>
<td>6.</td>
<td>Have you ever had a prostate examination? If yes, about how long ago?</td>
</tr>
<tr>
<td>7.</td>
<td>How often should a man have a prostate examination and PSA blood test?</td>
</tr>
<tr>
<td>8.</td>
<td>Have you ever been told you have prostate cancer?</td>
</tr>
<tr>
<td>9.</td>
<td>Which of these statements best describes how you pay for your health care?</td>
</tr>
<tr>
<td>10.</td>
<td>Which range of income describes your annual income?</td>
</tr>
</tbody>
</table>

Instrumentation

Using Pender’s Health Promotion Model, Lambert, Newton, and deMeneses (1998) developed an instrument to measure the health beliefs, screening practices, and knowledge level about breast cancer in women. Fearing et al. (2000) then adapted the original instrument to measure the same concerns about prostate cancer in men. The resultant instrument, the Prostate Health Questionnaire, was then used to obtain this information from African-American men (Fearing et al., 2000) and to compare these phenomena between African-American men and Caucasian men (Lambert, Fearing, Bell, & Newton, 2002).

The Prostate Health Questionnaire (Fearing et al., 2000) consists of 22 statements to which the participant is asked to report his degree of agreement or disagreement on a Likert scale ranging from 1 (definitely yes) to 4 (definitely no); possible scores range from 22 to 88. Kleier added 10 demographic questions (see Table 1) designed to screen for inclusion criteria and to address variables identified by Purnell and Paulanka (1998) and within previous studies (Boyd et al., 2001; Hutchinson & Simeon, 2000; Mercer et al., 1997; Price et al., 1993; Shelton et al., 1999; Smith et al., 1997; Stallings et al., 2000; Thomas et al., 1999) as being associated with higher levels of knowledge of prostate cancer and incidence of participat-
ing in health care check-ups or prostate cancer screening. Included in the demographic section were questions regarding income and health care insurance coverage. Lastly, and as directed by Purnell and Paulanka (1998), the demographic section included an item on the number of years the participant had been living in the United States as a measure of acculturation.

Translation and Adaptation Of the Instrument

The initial phase of the adaptation work required that the Prostate Health Questionnaire (Fearing et al., 2000) be subjected to a rigorous translation process. Kleier, working with a group of Jamaican and Haitian research assistants (RA) and following guidelines from the National Institute of Child Health and Human Development (Li, McCordle, Clark, Kinsella, & Berch, 2001), translated the American English version into Jamaican English, Haitian English, Haitian Creole, and Haitian French. English is the official language for Jamaicans; however, just as the dialect of English language spoken by individuals living in the United Kingdom may be different from the English language spoken by Americans, so the dialect of English language spoken by Jamaicans is unique.

Two teams worked independently to translate the American English version of the instrument into the target languages. The Jamaican team consisted of two native Jamaicans. Based on their individual and collaborative opinions that the American English version was appropriate, no changes were made in the instrument.

The Haitian team consisted of two Haitian-born, professional translators. These two agreed that the American English version was appropriate for use with Haitian men so no changes were made in the English version of the instrument. Working individually, they translated the American English version into Haitian Creole and Haitian French. Rather than literal translation of words, the RAs translated for comparability of meaning. These RAs exchanged their individual products and the questions were back-translated into American English. The team then met to compare the products for conceptual equivalence and to agree on the final versions.

The next step was to validate the translated versions by taking them to members of the target populations to ask for their interpretation of the item’s meaning, to evaluate for content and semantic equivalence, to validate the translation, and to determine the cultural appropriateness of the tool. In the presence of a Jamaican RA, five native Jamaican men, who read and spoke Jamaican English, were asked to read the instrument and comment on their understanding of the items. The men agreed that the instrument was clear and unambiguous so no changes were made to the English version of the instrument for use with Jamaican men.

In the presence of a Haitian RA, five Haitian men were asked to provide the same critique. Three of these men read and spoke Haitian Creole and Haitian French but not English; two were able to speak and read Haitian Creole, Haitian French, and English. These men found the translated instrument to be clear and understandable, and so no changes were made to the translated versions of the instrument. The final draft of the instrument included all three languages, each language occupying one column on one document, so that participants were able to select and mark their responses in the language version they preferred.

Consistency and Reliability

The final phase of the study involved testing the translated instruments with larger samples of the target populations to further assure that the translated versions were comprehensible in both written and oral presentation, had internal consistency, and were reliable over time. Examples of the translated items are presented in Table 2.

Setting

The participants were residing in Miami-Dade, Florida. According to the U.S. Census Bureau (2000), Miami-Dade had a total population of 2,253,362. This total was further distinguished as consisting of 1,086,558 (14%) males age 45 and over. There were 1,148,765 (50%) who were foreign born. Of these, 34,450 (3%) reported to have been born in Jamaica, and 71,054 (6%) reported to have been born in Haiti. The census, however, did not identify the gender of these foreign-born individuals. Additionally, it must be acknowledged that the numbers reported in the census are not reflective of the large number of undocumented immigrants living in the area.

Procedure

Ethnically matched RAs used convenience sampling to recruit participants at various times and locations throughout the county where large numbers of Jamaican and Haitian men congregated including barber shops, shopping centers, churches, and neighborhood domino groups. Selection criteria included black men who (a) self-identified as either Jamaican or Haitian, and (b) were aged 45 years or older. The volunteers were asked to complete the instrument twice: once at the time of the initial contact with the RA present to provide assistance and receive comments, and to take a second copy to be completed and returned to the researcher within a 2-week time frame.

Sample

A total of 156 men, 69 Jamaican and 87 Haitian, completed the instrument at the initial contact. Fifty-four (74%) of the Jamaican and 80 (92%) of the Haitian participants completed a second instrument which was used for test-retest reliability analysis.
The Jamaican sample. The 69 Jamaican participants ranged in age from 45 to 77 years ($\bar{X} = 57.41$, SD=8.59) and had been living in the United States between less than 1 year and 54 years ($\bar{X}=16.41$, SD=12.77). Table 3 provides a detailed description of the characteristics of the Jamaican sample. The majority (n=41, 59.4%) of the Jamaican participants were aware of the recommendation for annual prostate cancer screening. Indeed, they overwhelmingly (n=50, 72.5%) had been screened for prostate cancer at sometime in their lives; 27 (39.16%) reported having been examined within the past year and 12 (17.4%) claimed to have been examined within 1 to 5 years. Only 1 individual of the 50 who claimed to have been examined reported that his examination was greater than 5 years previously. Lastly, eight (11.6%) stated that, while they had been examined at sometime, they could not recall how long ago it had been. One of the men marked the survey question that he had been told, at sometime, that he had prostate cancer; his followup status was not reported.

The Haitian sample. The 87 Haitian participants ranged in age from 45 to 77 years ($\bar{X}=55.23$, SD=8.91) and had been living in the United States between less than 1 year and 34 years ($\bar{X}=11.45$, SD=7.23). Table 4 provides a detailed description of the characteristics of the Haitian sample. While the majority (n=46, 52.9%) of the Haitian participants were aware of the recommendation that they be examined for prostate cancer annually, an alarming number (n=44, 50.6%) had never been screened. Of those who had been screened, 17 (19.5%) claimed to have been examined within the past year while 18 (20.7%) claimed to have been examined within 1 to 5 years. Three participants (3.4%) reported that their examination had been greater than 5 years previously and two (2.3%) stated that, while they had been examined previously, they could not recall when. Three men (3.4%) noted that they had, at some time, been told they had prostate cancer; the followup status of these men was not reported. Two participants (2.3%) did not respond to this question.

Results

The responses to the translated versions of the Prostate Health Questionnaire were analyzed for internal consistency using Cronbach’s alpha reliability coefficient. Tukey’s test of additivity value was used to identify poorly functioning items. Stability over time was estimated by means of Pearson’s correlation of scores obtained on the test-retest surveys, the administration of the same instrument to the same subjects at two points in time.

The Jamaican sample. Sixty-nine Jamaican participants completed the test form of the instrument; 54 (73%) of these also completed the retest form. Scores for the test form ranged from 33 to 69 ($\bar{X}=52.62$, SD=8.22); scores for the retest form ranged from 38 to 68 ($\bar{X}=53.44$, SD=7.95). Correlation between the test and the retest forms was exceedingly high ($r=0.912$, $p<0.01$). The alpha coefficient for the test form was

### Table 2.
Examples of Questionnaire Items with Corresponding Haitian Creole and Haitian French Translation

<table>
<thead>
<tr>
<th></th>
<th>English</th>
<th>Haitian Creole</th>
<th>Haitian French</th>
</tr>
</thead>
</table>
| 1 | I am likely to develop prostate cancer sometime during my lifetime.  
1. Definitely yes  
2. Probably yes  
3. Probably no  
4. Definitely no | Mwen panse ke m’ta ka gen kansè pwostat yon jou.  
1. Wi  
2. Mwen ta di sa.  
3. Mwen pa kwè sa  
4. Non | J’ai de grands risques de développer le cancer de la prostate au cours de ma vie.  
1. Assurément  
2. Probablement  
3. Probablement pas  
4. Certainement pas |
| 2 | I have a greater chance than the average man to develop prostate cancer.  
1. Definitely yes  
2. Probably yes  
3. Probably no  
4. Definitely no | Mwen gen plis chans ke lòt gason pou m’vin gen kansè pwostat.  
1. Wi  
2. Mwen ta di sa.  
3. Mwen pa kwè sa  
4. Non | Mon risque de développer le cancer de la prostate est supérieur à celui des autres hommes.  
1. Assurément  
2. Probablement  
3. Probablement pas  
4. Certainement pas |
| 3 | If you are going to get prostate cancer nothing can prevent it.  
1. Definitely yes  
2. Probably yes  
3. Probably no  
4. Definitely no | Pa gen aney ki pou anpeche kansè pwostat.  
1. Wi  
2. Mwen ta di sa.  
3. Mwen pa kwè sa  
4. Non | Rien ne peut prévenir le cancer de la prostate.  
1. Assurément  
2. Probablement  
3. Probablement pas  
4. Certainement pas |
| 4 | If prostate cancer is detected early it is more likely to be curable.  
1. Definitely yes  
2. Probably yes  
3. Probably no  
1. Wi  
2. Mwen ta di sa.  
3. Mwen pa kwè sa  
4. Non | Si le cancer de la prostate est diagnostiqué à temps, il est possible de le traiter.  
1. Assurément  
2. Probablement  
3. Probablement pas  
4. Certainement pas |
0.75; Tukey’s estimate of the power to which observations must be raised to achieve additivity was 1.91 and no item met the criteria for deletion.

The Haitian sample. Eighty-seven Haitian participants completed the test form of the instrument; 80 (91.9%) of these completed the retest form. Of the 87 surveys, 47 (54%) were completed in English, 29 (33.3%) were completed in Haitian Creole, and 11 (12.6%) were completed in Haitian French. The survey had to be read to 16 (18.4%) of the participants because they were either unable to read any of the three languages or because they were unable to see the print. The language of choice for those 16 participants was Haitian Creole and the oral presentation of the instrument was well understood. As all three languages were provided on the instrument, scores were calculated on the instrument as a whole regardless of the language chosen. Scores for the test form ranged from 24 to 70 ($X=48.34$, $SD=8.09$); scores for the retest form ranged from 26 to 70 ($X=47.53$, $SD=8.42$). The alpha coefficient for the test form was 0.73. Tukey’s estimate of the power to which observations must be raised to achieve additivity was 0.84; no item met the criteria for deletion. Correlation between the test and the retest was exceedingly high ($r=0.937$, $p<0.01$).

Discussion

Based on foundation knowledge from qualitative studies previously conducted on Jamaican and Haitian men (Hooper, 1998; Kleier, 2004; New York Task Force on Immigrant Health, 2001; Papadopoulos & Lees, 2002), and on quantitative studies of African-American and Caucasian men (Fearing et al., 2000; Lambert et al., 2002) regarding the knowledge of prostate cancer, the screening practices, and health beliefs regarding prostate cancer, the Prostate Health Questionnaire appeared to be a useful instrument for data collection from multicultural populations. This study has, through a multi-phase process, subjected the instrument to rigorous translation and testing for use with the high-risk populations of Jamaican and Haitian men.

Demographic data from this sample restated findings from a previous study of the same populations (Kleier, 2004) which found Jamaican men to have a very high rate and frequency of being screened for prostate cancer while Haitian men have an exceedingly low rate of screening.

Table 3.
Demographic Characteristics of the Jamaican Sample (n=69)

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45-55</td>
<td>32</td>
<td>46.4</td>
</tr>
<tr>
<td>56-65</td>
<td>24</td>
<td>34.8</td>
</tr>
<tr>
<td>66-75</td>
<td>11</td>
<td>15.9</td>
</tr>
<tr>
<td>75+</td>
<td>1</td>
<td>1.4</td>
</tr>
<tr>
<td>No answer</td>
<td>1</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Educational Background</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not completed high school</td>
<td>12</td>
<td>17.4</td>
</tr>
<tr>
<td>High school graduate</td>
<td>19</td>
<td>27.5</td>
</tr>
<tr>
<td>Some college</td>
<td>23</td>
<td>33.3</td>
</tr>
<tr>
<td>College graduates</td>
<td>11</td>
<td>15.9</td>
</tr>
<tr>
<td>Completed trade school</td>
<td>3</td>
<td>4.3</td>
</tr>
<tr>
<td>No answer</td>
<td>1</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Divorced</td>
<td>8</td>
<td>11.6</td>
</tr>
<tr>
<td>Domestic partnership</td>
<td>2</td>
<td>2.9</td>
</tr>
<tr>
<td>Living with partner</td>
<td>5</td>
<td>7.2</td>
</tr>
<tr>
<td>Married</td>
<td>34</td>
<td>49.3</td>
</tr>
<tr>
<td>Multiple partners</td>
<td>2</td>
<td>2.9</td>
</tr>
<tr>
<td>Never married</td>
<td>2</td>
<td>2.9</td>
</tr>
<tr>
<td>Non-cohabitating partnership</td>
<td>3</td>
<td>4.4</td>
</tr>
<tr>
<td>Separated</td>
<td>6</td>
<td>8.8</td>
</tr>
<tr>
<td>Single</td>
<td>6</td>
<td>8.7</td>
</tr>
<tr>
<td>No answer</td>
<td>1</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Annual Income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than $10,000</td>
<td>10</td>
<td>14.5</td>
</tr>
<tr>
<td>$1,000 - $30,000</td>
<td>18</td>
<td>26.1</td>
</tr>
<tr>
<td>$31,000 - $50,000</td>
<td>29</td>
<td>42.0</td>
</tr>
<tr>
<td>Greater than $50,000</td>
<td>11</td>
<td>15.9</td>
</tr>
<tr>
<td>No answer</td>
<td>1</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Payment for Health Care</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insured for health care</td>
<td>40</td>
<td>58.0</td>
</tr>
<tr>
<td>Paid for health care themselves</td>
<td>19</td>
<td>27.5</td>
</tr>
<tr>
<td>Used free/reduced cost clinics for health care</td>
<td>8</td>
<td>13.0</td>
</tr>
<tr>
<td>No answer</td>
<td>1</td>
<td>1.4</td>
</tr>
</tbody>
</table>

Alpha coefficients were all over the accepted level of 0.70, demonstrating a moderate level of internal consistency. Further, no individual item significantly added or detracted from the internal consistency. The instrument had high stability over time; correlations of the participants’ test and retest responses were exceedingly high.

Data collection from the Haitian population was complicated by the need to provide the instrument in three languages —
English, Haitian Creole, and Haitian French — and the high rate of illiteracy. This necessitated that an ethnically matched RA, fluent in three languages, be physically present to collect data. This has implications for the labor intensity and costs associated with collecting data from large-sized samples of Haitian men.

The findings herein indicate that the translated instrument is comprehensible, has internal consistency, and is reliable over time. Further, it is well understood by both written and oral presentation and so is appropriate for those who are unable to read. Based on previous qualitative work by Kleier (2004), the survey items meet the criteria of content and conceptual equivalence; the rigor of the translation process has assured semantic equivalence. Followup studies are needed to assess for criterion equivalence or efficacy of prediction of prostate screening behavior and for technical equivalence by using different methods or different instruments which measure the same phenomena.

**Nursing Implications**

Health promotion and disease prevention are major concerns for nurses. Nursing has long been cognizant of the need to provide culturally competent care. Understanding the unique perceptions of ethnic minorities regarding health promotive practices is essential in order to plan health care interventions that will be effective in meeting the needs of those groups. Many minority populations are severely underserved and disenfranchised due to language barriers and illiteracy. Using standardized, ethnically sensitive, and language-appropriate research instruments that can either be completed by the individual or understood by oral presentation is a step toward reducing health care disparity.

**Conclusions**

This study supports the need for language-specific versions of research instruments for subcultures of individuals living in the United States. Even though others may lump subcultures of black individuals into the “melting pot” of African-American men, their language differences and literacy levels must be addressed if an accurate measure of their health knowledge, beliefs, and practices are to be determined. This study has achieved a major step in the quest to determine these factors for Jamaican and Haitian men regarding prostate cancer; however, larger sample sizes are needed for the findings to be generalizable to the entire target populations. Once determined, health care interventions can be devised which are specifically aimed at encouraging screening for early detection of prostate cancer, reducing the devastating consequences of prostate cancer for these populations, and reducing the health care disparity for these minority groups.

**References**


