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Levi Ross, Georgia Southern University
Alicestine D. Ashford
Sherese J. Bleechington
Tyra Dark
Deborah C. Erwin

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Levi Ross, PhD, MPH, CHES¹ [Health Education/Health Promotion], Alicestine D. Ashford, EdD, MPH² [Healthcare Policy and Management], Sherese J. Bleechington, MPH, CHES³ [Health Education/Health Promotion], Tyra Dark, PhD, MA⁴ [Epidemiology], and Deborah O. Erwin, PhD⁵ [Medical Anthropology]

¹Roswell Park Cancer Institute, Office of Cancer Health Disparities, Elm & Carlton Streets, Buffalo, NY 14263, 716.845.4920 (office), 716.845.8487 (fax), levi.ross@roswellpark.org
²Institute of Public Health, 209-C FSH Science Research Center, Tallahassee, FL 32307, 850.599.3111 (office), 850.599.8830, alicestine.ashford@famu.edu
³Institute of Public Health, FSH Science Research Center, Tallahassee, FL 32307, 850.284.7209 (office), 850.414.8103 (fax), sbleechington@msn.com
⁴Institute of Public Health, 203-B FSH Science Research Center, Tallahassee, FL 32307, 850.412.5494 (office), 850.599.8830 (fax), tyra.dark@famu.edu
⁵Roswell Park Cancer Institute, Office of Cancer Health Disparities, Elm & Carlton Streets, Buffalo, NY 14263, 716.845.2927 (office), 716.845.8487 (fax), deborah.erwin@roswellpark.org

Abstract

Purpose—To evaluate the applicability of an evidence-based video intervention to promote informed decision making for prostate cancer (CaP) screening among African-American men with different levels of health literacy.

Methods—Forty nine African-American men participated in interviewer-administered, pretest-posttest interviews between January and March 2008. Health literacy status was assessed with the Test of Functional Health Literacy in Adults (TOFHLA). Repeated measures analysis of covariance (ANCOVA), McNemar or binomial distributions were computed to assess pretest/posttest differences in knowledge. Descriptive statistics were produced to describe participants’ perceptions of the information presented in the video.

Results—Results indicated that men with functional health literacy had higher mean levels of CaP screening knowledge at baseline than men with inadequate health literacy. The between group (F₂,44 = 4.84; p = .013) and within group (F₁,44 = 5.16; p = .028) test results from repeated measures ANCOVA indicated that preexisting group differences in CaP knowledge had lessened after intervention exposure. Nearly all men rated the information presented in the video as credible (98%), trustworthy (96%), interesting (100%), understandable (94%), and complete (96%).

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Correspondence to: Levi Ross.
Conclusions—Result from this exploratory study suggests that the video intervention is suitable for use with African-American men with different health literacy characteristics in two counties in the Greater Florida Panhandle Region. More research is recommended to evaluate the impact of the intervention on men’s intentions to undergo screening and actual screening behavior.

Keywords
Health literacy; prostate cancer education; African-American men

Despite overall declines in prostate cancer (CaP) mortality in recent years, CaP continues to be a major problem for several subpopulations in the United States. African-American men experience higher incidence and mortality from CaP, they continue to be diagnosed with later stages of the disease, and they have lower 5-year survival rates than Caucasian men.\(^1,2\)

Studies that focus on education or literacy confirm that men with lower levels of literacy experience more negative CaP outcomes than those with higher literacy levels. For example, using data from the National Center for Health Statistics (NCHS), Albano and colleagues\(^3\) found that the CaP mortality rate for African-American men with fewer than 12 years of education was more than twice the rate of African-American men with 12 or more years of education. Wolf et al.\(^4\) discovered that men with low literacy skills were more than twice as likely to have prostate specific antigen (PSA) levels > 20 ng/mL at time of diagnosis than men classified as functionally literate. With samples of men from Shreveport, Louisiana and Chicago, Illinois, Bennet et al.\(^5\) found that men with low literacy (54.5%) were more likely to present with late stage CaP than men with higher literacy (37.7%).

Precise estimates of the prevalence of health literacy are unknown. However, a growing body of research suggests that African Americans are more likely to have lower levels of health literacy than Caucasians.\(^6–8\) Given the increased risks for adverse CaP related events, African-American men with low literacy skills should be a priority for CaP disparities research.

A fair amount of contemporary CaP research has focused on readiness to make informed decisions for screening via the prostate specific antigen (PSA) blood test.\(^9–18\) Readiness to make informed decisions for CaP screening is important especially given the contradictory findings from two recently published articles from large scale screening trials conducted in Europe and in the United States regarding the effects of screening on mortality.\(^19,20\) A review of the readiness to make informed screening decisions literature makes three issues clear. First, many men who are eligible for CaP screening are not prepared to make informed decisions about whether they should screen. Second, African Americans, men from lower socioeconomic (SES) groups and men with lower levels of education are less ready to make informed screening decisions than their Caucasian, higher SES and higher educated counterparts. Third, men can gain the knowledge they need to make informed screening decisions through effective education.

The aim of the exploratory research presented in this manuscript was to evaluate the applicability of an informed decision making video intervention—The PSA Test for Prostate Cancer: Is it Right for Me?—for use with African-American men with different levels of health literacy. This video intervention is promoted by the National Cancer Institute’s Cancer Control P.L.A.N.E.T. ([Plan, Link, Act, Network with Evidence-based Tools] www.http://cancercontrolplanet.cancer.gov/index.html) as a research tested intervention program (RTIP) to help build CaP awareness in men considering PSA screening. We assessed acceptability of the video and evaluated the impact of the intervention on CaP knowledge across participants’ demographic and health literacy characteristics.
Methods

Research design

Survey methodology was utilized in a single session, pretest-posttest research design to explore participants’ evaluations of the video intervention and to assess the intervention’s impact on participants’ knowledge of CaP screening and treatment issues. Nonrandomized, quasi-experimental research designs are suitable for exploratory studies where hypotheses are to be generated and not tested.21

Inclusion/exclusion criteria

Study inclusion was limited to African-American men, ages 35 years and above, who had or had not previously participated in CaP screening, living in two counties in the Greater Florida Panhandle Region. Even though professional organizations do not recommend African-American men to consider prostate cancer screening until 40 years of age, we included men between the ages of 35 and 39 because we believe men need to receive preparatory screening education information prior to the time that they are faced with a screening decision. Men who were unable to speak English fluently were ineligible for study participation.

Setting

Leon County, Florida is a relatively urban county. The total population is 245,756. African Americans comprise 30.2% of the total population. Approximately 13.0% of inhabitants live below the federal poverty line.22 The CaP mortality rate in Leon County (34.4/100,000) is the 8th highest in the state.23

Gadsden County, Florida is a relatively rural county. The total population is 46,428. African Americans represent 56.0% of the population. Nearly one fifth (18%) of inhabitants live below the poverty line.22 The CaP mortality rate in Gadsden County (40.4/100,000) is the fourth highest in the state.23 The CaP mortality rates in both study sites exceed the Healthy People 2010 objective of 28.8/100,000.24

Recruiters/recruitment

One community health advisor and two church pastors were recruited to work on the research project as key informants. Each key informant resided in the community where intervention sessions were conducted. Each key informant was responsible for recruiting men who fit the study eligibility criteria, and securing a meeting location in their respective communities. Key informants completed all participant recruitment via face-to-face contact, telephone, and community postings.

Site selection

Each key informant was tasked with identifying a site where the intervention video could be shown to a small group (6 – 12 men) and one-on-one interviews could be completed in private. All meetings were conducted at 2 churches (one in Gadsden County, one in Leon County) and a community center (Gadsden County) between January and March 2008.

Procedures

After eligible participants were assembled at the meeting locations, the study protocol and consent form was read to them by the PI or trained research assistant. All men were informed that we were studying issues surrounding CaP in the African American community and that study participation required them to complete a pretest, watch a video, and complete a posttest. Participants were instructed that all three study components would take
90 minutes to complete, their study participation was voluntary, they were free to withdraw from participation at any time, and all responses would be kept confidential.

Men who provided written informed consent to participate were paired with an interviewer and taken to a private space at the meeting location to complete the 35 minute interviewer administered pretest interview. Six graduate research assistants (4 females, 2 males) assisted the PI in collecting data over the course of the study. One student was a certified health education specialist and a second year doctoral student in health education, four were graduating master of public health (MPH) students, and one was a first year MPH student with extensive interviewing experience. All interviewers, including the PI, were African American.

After participants completed the pretest interview, they were ushered to the space where the intervention video would be shown. As participants waited for all group members to complete their pretest surveys, they were shown a general healthy lifestyles video. Once all pretest interviews were completed and all participants were assembled, the intervention video was shown. Immediately after watching the video, each participant was paired with the interviewer who conducted his pretest interview to complete the 5 minute posttest interview. All posttest interviews were conducted in the same private area where pretest interviews were performed. Immediately after completing the posttest interview, each participant was given a $30.00 Visa gift card for his time. All study procedures were approved by the institutional review board (IRB) at the university where the PI was employed.

**Measures**

As part of a larger study, the pre- and posttest surveys collected demographic information, CaP screening history, CaP information seeking behavior, health literacy information, and CaP knowledge. Descriptions of the items that were used in this manuscript are listed below.

**Demographic information**—Information was collected regarding participants’ age, race/ethnicity, marital status, employment status, household income, education, and insurance status.

**Prostate cancer screening history**—Participants were asked if they had talked with a physician about PSA testing in the past 12 months and if they had a PSA test in the past 12 months.

**Health literacy**—Participants’ ability to obtain and use health information was measured with the Test of Functional Health Literacy in Adults (TOFHLA). The TOFHLA is a validated 67-item measure that assesses participants’ abilities to comprehend quantitative and written health information. The numeracy measure has 17 items. The reading comprehension measure has 50 items. The total TOFHLA score range is 0 – 100. The TOFHLA is individually administered and takes 10 to 20 minutes to complete. Using the TOFHLA, participants can be classified into one of three groups. Individuals who can read and interpret most health information are classified as having functional literacy skills (75 – 100). Individuals who have difficulty in reading and interpreting health information are classified as having marginal literacy skills (60 – 74). Individuals who are unable to read and interpret health information are classified as having inadequate literacy skills (0 – 59).

**Prostate cancer knowledge**—To assess participants’ pretest and posttest levels of CaP knowledge, participants were asked to complete the 10-item PROCASE Knowledge Index. The items included in this index are designed to evaluate knowledge in 3 separate
Cap domains. Items 1 through 5 measure knowledge about the natural history of the disease and Cap risk factors. Items 6 through 8 measure knowledge regarding PSA accuracy and follow-up tests. Items 9 and 10 measure knowledge about Cap treatment complications. Sample items include: “Most men diagnosed with prostate cancer die of something else” and “The PSA (prostate specific antigen) test will pick up ALL prostate cancers”. Response options are “True,” “False,” or “Don’t know.” Composite scores for this index range from 0 – 10, with higher scores indicating greater knowledge. “Don’t know” responses are coded as incorrect. The reported KR-20 for this index is 0.68.

**Perceptions of the video information**—Participants were asked to provide their perceptions of information presented in the video on seven dimensions: usefulness, credibility, trustworthiness, appeal (interest), understandability, clarity (confusion), and completeness. Questions included in this measure were compiled and adapted from questions used in studies from the literature where evaluations of decision aids were assessed ($\alpha = .70$). 27, 28

**Balance of information**—One question was used to assess participants’ perceptions of the balance of the information presented in the video. The stem for this question read, “I think the information presented in the video was ____.” Response options were: clearly slanted toward screening, slightly slanted toward screening, not slanted toward or against screening, slightly slanted against screening, and clearly slanted against screening. 29

**Analysis Plan**

Univariate statistics (frequencies and means) were computed to describe sample characteristics and participants’ perceptions of the information presented in the video. Bivariate statistics (chi-square, t-tests, and analysis of variance [ANOVA]) were computed to identify demographic differences by literacy status and baseline differences in pretest knowledge by literacy status. Variables significantly associated with pretest knowledge were entered as covariates in a repeated measures analysis of covariance (ANCOVA) to evaluate pretest/posttest changes in knowledge. Following the repeated measures ANCOVA, a series of McNemar or binomial tests were computed to evaluate pretest/posttest changes on individual knowledge items. Significance levels for all statistical procedures were set at $p \leq .05$ (two sided). Where applicable, p-values were adjusted for multiple comparisons using the bonferroni correction. All statistical analyses were conducted using SPSS 16.0. 30

**Results**

**Demographic information**

Forty nine African-American men participated in the study. Sample demographic characteristics are included in Table 1. A majority of men were married (74%), privately insured (63%), and graduated high school (79%). More than two thirds (67%) of participants reported household incomes of $25,000 or greater. Most men (59%) reported having talked with a physician about Cap in the past 12 months. More than half (55%) reported having a PSA test in the past 12 months.

**Demographic characteristics by literacy status**

Bivariate statistics were computed to examine demographic characteristics by literacy categories and one relationship was found. Results from Chi-square analysis indicated that health literacy status was significantly associated with education ($p = .002$). Demographic characteristics by health literacy status are also presented in Table 1.
Baseline prostate cancer knowledge

Mean pretest knowledge scores were produced for the entire study sample and for the sample stratified by health literacy status. The mean pretest knowledge score for the entire sample was 6.77. Mean pretest knowledge scores for men with inadequate, marginal and functional health literacy were 5.45, 6.12 and 7.43, respectively. Results from one way analysis of variance (ANOVA), with age, employment status, income, education, and PSA screening status as covariates, indicated that men classified as having inadequate health literacy had significantly lower levels of baseline knowledge than men with functional health literacy.

Pretest-posttest knowledge differences

A two (time) by three (literacy level) mixed-model ANCOVA was produced to examine participants’ changes in CaP knowledge from pretest to posttest with education as a covariate. Significant main effects for literacy status ($F_{2,44} = 4.84; p = .013$) and time ($F_{1,44} = 5.16; p = .028$) were obtained. Education was significant as a covariate ($F_{1, 44} = 4.48; p = .040$). These findings reveal that the three groups started out with different levels of CaP knowledge at baseline and all groups gained knowledge after viewing the video. The significant covariate indicates that education level along with health literacy status had an effect on whether men gained CaP screening knowledge. The overall sample increased their CaP knowledge scores from 6.77 at pretest to 8.24 at posttest ($t(48) = -6.851, p < .01$). Men classified as having inadequate health literacy increased their CaP knowledge scores from 5.45 at pretest to 7.50 at posttest ($t(10) = -7.416, p < .01$). Men classified as having marginal health literacy increased their scores from 6.12 to 7.62 ($t(7) = -3.969, p < .01$). Those classified as having functional health literacy increased their scores from 7.43 at pretest to 8.70 at posttest ($t(29) = -3.986, p < .01$). The interaction of time by literacy status was not significant ($F_{2,44} = .732; p = .487$).

Pretest-posttest knowledge differences (individual items)

The results of a series of McNemar and binomial tests to determine pretest/posttest differences in the proportions of correct and incorrect responses on individual CaP knowledge items are listed in Table 2. The percentage of men who improved their pretest/posttest knowledge scores on individual knowledge items ranged from 2.0% to 83.7%. Significant improvement in posttest scores occurred among the four items: Most men diagnosed as having prostate cancer die of something else ($p = .001$), men are more likely to die of prostate cancer than because of heart disease ($p = .001$), the PSA (prostate-specific antigen) test will pick up ALL prostate cancers ($p = .001$), and loss of sexual functioning is a side effect of prostate cancer treatments ($p = .006$).

Evaluation of the video

Participants’ evaluations of the information presented in the video are presented in Figure 2. All participants rated the information presented as useful. Nearly all (98%) believed the information was credible. Ninety six percent stated that the information was trustworthy. All men thought the information was interesting. Most (94%) stated that the information was understandable. More than two-thirds (80%) did not find the information to be confusing. Nearly all (96%) thought the information presented was complete. Most perceived the information presented to be slanted toward screening (54%) or neutral (not slanted toward or against screening [35%]).
Discussion

Education is an essential component of the national blueprint to eliminate cancer health disparities. Evidenced-based tools exist that can help men learn about the issues surrounding prostate cancer screening. However, many of these tools have not been evaluated for use with the subpopulations with the greatest educational needs. The purpose of this exploratory study was to examine the applicability of an evidenced-based video intervention—The PSA for Prostate Cancer: Is it right for me?—for use with African-American men with different levels of health literacy in the Greater Florida Panhandle. Results from this exploratory study suggest that the video intervention is useful for African-American men with different levels of health literacy in two counties in the Greater Florida Panhandle Region.

We first evaluated the impact of the video intervention on knowledge about issues surrounding prostate cancer screening with the PSA blood test. We found that CaP knowledge scores for the entire sample were significantly higher at posttest than at pretest. CaP knowledge scores increased for 77.6% of participants, remained the same for 14.3%, and decreased for 8.2%. This trend in short term increases in knowledge is consistent with results from other studies where the video intervention was tested. Some researchers have shown that knowledge gained from the intervention can endure from 2 weeks to 1 year. However, we were unable to confirm how long the knowledge gains witnessed in our sample lasted because our posttest was administered immediately following the video’s viewing.

We also explored the impact of the video intervention on PSA screening knowledge among men across different levels of health literacy. We were not surprised to find that there were positive associations between literacy level and CaP knowledge at baseline. That is, men with functional health literacy had the highest levels of CaP knowledge at pretest; men with marginal literacy had the second highest levels of CaP knowledge; and men with inadequate health literacy had the lowest levels of knowledge. Other researchers have found similar associations between health literacy and health-related knowledge with other populations in different health contexts. However, we were encouraged to discover that the video helped men in all three literacy groups learn something new. Most encouraging was the finding that men with the lowest level of health literacy had the highest gain in knowledge. Pretest-posttest knowledge differences for men with inadequate, marginal and functional health literacy were +2.05, +1.50, and +1.27, respectively.

To the best of our knowledge, this is the first instance of this video being tested with a focus on participant’s ability to comprehend messages according to health literacy status. Although health literacy has long been recognized as a key barrier to health education, cancer educators have been slow to incorporate this construct into cancer education research studies. Common reasons cited for not measuring health literacy in studies is that literacy is a sensitive topic and negative emotions (shame or embarrassment) may prevent individuals from revealing their literacy skill levels to others. Ryan et al. found that nearly all (98%) of the potential participants approached were willing to have their health literacy levels assessed in clinical settings. In the current study, all of the men we approached agreed to have their health literacy assessed in a community setting. Trust is critical to having an individual agree to complete a literacy assessment in any situation. There are several ways to build the trust needed to facilitate participant willingness to complete a literacy assessment. Ryan and colleagues capitalized on the trust built over time in patient-provider relationships. In our study, we established trust by including recruiters who were part of an existing community-academic partnership and by having racial concordance between our interviewers and interviewees. More research is needed to determine other situations that
facilitate or inhibit the trust needed to conduct health literacy assessments in different settings.

To determine which specific CaP knowledge details the video helped participants learn, we examined changes in the proportions of correct and incorrect responses for each knowledge question at pretest and posttest. Consistent with other studies, a large portion of men in our sample had difficulty with the specific item “Prostate cancer is the MOST COMMON cause of problems with urination.” In a sample of 1,152 veterans 50 years of age and older, Partin and colleagues found that slightly less than a third (32%) of participants were able to answer this question correctly after viewing the video. In our sample, only 36.8% of men were able to answer this question correctly post video viewing. More troubling was the finding that half of the men in our sample answered this question correctly at baseline but incorrectly on the posttest.

After reviewing the video again, our team discovered a clip where prostate cancer complications are listed and “difficulty urinating” is listed first with “pain,” “weight loss,” and “death” following, respectively. Perhaps, men watching this video interpret the placement of “difficulty urinating” at the top of this list to mean that prostate cancer is the MOST COMMON cause of problems with urination. We do not believe this finding invalidates the utility of the video but it does indicate that problems may arise if the video is shown without a period of facilitated discussion. Recognizing that facilitated discussion may not always be possible after the video is shown, we suggest that the developers of this video conduct additional research with men to find more effective ways to state this important piece of information in future versions.

In addition to the study findings mentioned above, there are several limitations to this research that must be acknowledged. The first limitation is that a convenience sampling strategy was employed. The use of this type of sampling scheme limits the external validity of our findings to men whose characteristics are similar to those of this study’s population. While convenience sampling was appropriate for our exploratory investigation to assess the usefulness of the intervention with African-American men in a small geographic area, future research should be conducted with larger samples of African-American men using a random sampling strategy. The quasi-experimental, one group pretest-posttest group design is suboptimal and does not allow us to rule out known threats to internal validity (i.e., instrumentation and testing). PSA screening was assessed but not verified through individual chart reviews. The absence of an additional follow up period limited our ability to determine any effects of the intervention on long term behaviors—talking with a physician or undergoing future PSA testing. We believe these are important outcomes and future studies should seek to evaluate how the intervention influences these behaviors. Finally, the results of this study are based on self report. Thus, problems that are inherent in studies relying on self-reported data collection (e.g., recall bias, social desirability) also apply here.

**Conclusions**

Using evidenced-based interventions with different populations is an efficient use of limited resources and an effective way to accelerate the nation’s health disparities research agenda. Our findings regarding the intervention’s effect on men’s CaP screening knowledge and participant’s positive evaluations of the information presented in the video suggest that this intervention is useful for African-American men with different levels of health literacy. The next step of this research is to conduct longitudinal studies with larger samples of African-American men to determine the intervention’s long term effects on knowledge, intentions to be screened and actual CaP screening behavior.
References

Figure 1.
Pretest-Posttest Prostate Cancer Knowledge Scores by Health Literacy Status.
Figure 2.
Distribution of Participants' Perceptions of Information Presented in the Video
### Table 1

#### Sample Demographic Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Total n=49</th>
<th>Inadequate Literacy n=11 (22%)</th>
<th>Marginal Literacy n=8 (16%)</th>
<th>Functional Literacy n=30 (61%)</th>
<th>p-value</th>
</tr>
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<tbody>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>35 – 91</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>59</td>
<td>65</td>
<td>60</td>
<td>57</td>
<td>.241</td>
</tr>
<tr>
<td>Household Income</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;$25,000</td>
<td>15 (33%)</td>
<td>6 (55%)</td>
<td>3 (43%)</td>
<td>6 (22%)</td>
<td></td>
</tr>
<tr>
<td>≥$25,000</td>
<td>30 (67%)</td>
<td>5 (45%)</td>
<td>4 (47%)</td>
<td>21 (78%)</td>
<td>.134</td>
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<tr>
<td>Marital Status</td>
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<tr>
<td>Married</td>
<td>36 (74%)</td>
<td>7 (64%)</td>
<td>7 (87%)</td>
<td>22 (73%)</td>
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<tr>
<td>Unmarried</td>
<td>13 (26%)</td>
<td>3 (36%)</td>
<td>1 (12%)</td>
<td>8 (27%)</td>
<td>.508</td>
</tr>
<tr>
<td>Employment Status</td>
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</tr>
<tr>
<td>Working</td>
<td>23 (47%)</td>
<td>5 (45%)</td>
<td>2 (25%)</td>
<td>16 (53%)</td>
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<tr>
<td>Not Working</td>
<td>26 (53%)</td>
<td>6 (55%)</td>
<td>6 (75%)</td>
<td>14 (47%)</td>
<td>.359</td>
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<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>&lt;High School</td>
<td>10 (21%)</td>
<td>5 (45%)</td>
<td>4 (50%)</td>
<td>1 (3%)</td>
<td></td>
</tr>
<tr>
<td>High School Graduate</td>
<td>15 (31%)</td>
<td>3 (27%)</td>
<td>3 (37%)</td>
<td>9 (31%)</td>
<td></td>
</tr>
<tr>
<td>&gt;High School</td>
<td>23 (48%)</td>
<td>3 (27%)</td>
<td>1 (12%)</td>
<td>19 (65%)</td>
<td>.003 *</td>
</tr>
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<td>Health Insurance</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>29 (63%)</td>
<td>5 (45%)</td>
<td>4 (50%)</td>
<td>20 (74%)</td>
<td></td>
</tr>
<tr>
<td>Government</td>
<td>17 (37%)</td>
<td>6 (55%)</td>
<td>4 (50%)</td>
<td>7 (26%)</td>
<td>.178</td>
</tr>
<tr>
<td>Talked with physician about</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSA testing (past 12 mo.)</td>
<td>29 (59%)</td>
<td>9 (82%)</td>
<td>4 (50%)</td>
<td>16 (53%)</td>
<td>.219</td>
</tr>
<tr>
<td>Had PSA test (past 12 mo.)</td>
<td>27 (55%)</td>
<td>7 (64%)</td>
<td>4 (50%)</td>
<td>16 (53%)</td>
<td>.800</td>
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<tr>
<td>Talked with physician about</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSA testing (past 12 mo.)</td>
<td>29 (59%)</td>
<td>9 (81%)</td>
<td>4 (50%)</td>
<td>16 (53%)</td>
<td>.219</td>
</tr>
<tr>
<td>Pretest Knowledge (Mean)</td>
<td>6.77</td>
<td>5.45</td>
<td>6.12</td>
<td>7.43</td>
<td>.000 *</td>
</tr>
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</table>

* * p ≤ .05
Table 2

Pretest-Posttest Knowledge Responses

<table>
<thead>
<tr>
<th>Question (correct response)</th>
<th>Pretest–Posttest Responses (N=49)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorrect to Correct (%):</td>
<td>Correct to Correct (%):</td>
<td>Incorrect to Incorrect (%):</td>
</tr>
<tr>
<td><strong>Most men diagnosed as having Prostate cancer die of something else (True)</strong></td>
<td>22 (44.9%)</td>
<td>23 (46.9%)</td>
</tr>
<tr>
<td><strong>Men are more likely to die because of Prostate cancer than because of heart disease (False)</strong></td>
<td>23 (46.9%)</td>
<td>16 (32.7%)</td>
</tr>
<tr>
<td><strong>Prostate cancer is the MOST COMMON cause of problems with urination (False)</strong></td>
<td>5 (10.2%)</td>
<td>13 (26.5%)</td>
</tr>
<tr>
<td><strong>Prostate cancer NEVER causes problems with urination (False)</strong></td>
<td>41 (83.7)</td>
<td>4 (8.2%)</td>
</tr>
<tr>
<td><strong>Prostate cancer is one of the LEAST common cancers among men (False)</strong></td>
<td>24 (49.0%)</td>
<td>7 (14.3%)</td>
</tr>
<tr>
<td><strong>The PSA (prostate-specific antigen) test will pick up ALL prostate cancers (False)</strong></td>
<td>27 (55.1%)</td>
<td>14 (28.6%)</td>
</tr>
<tr>
<td><strong>A prostate biopsy can tell you with more certainty whether you have prostate cancer than a PSA (prostate-specific antigen) test can (True)</strong></td>
<td>7 (14.3%)</td>
<td>39 (79.6%)</td>
</tr>
<tr>
<td><strong>If you have an ABNORMAL PSA (prostate-specific antigen) test result, your doctor may recommend that you have a prostate biopsy (True)</strong></td>
<td>1 (2.0%)</td>
<td>45 (91.8%)</td>
</tr>
<tr>
<td><strong>Loss of sexual function is a common side effect of prostate cancer Treatments (True)</strong></td>
<td>11 (22.9%)</td>
<td>35 (72.9%)</td>
</tr>
<tr>
<td><strong>Problems with urination are common side effects of prostate cancer treatments (True)</strong></td>
<td>7 (14.9%)</td>
<td>40 (83.3%)</td>
</tr>
</tbody>
</table>

Incorrect to correct = item answered incorrectly at pretest and correctly at posttest.
Correct to correct = item answered correctly at pretest and correctly at posttest
Incorrect to incorrect = item answered incorrectly at pretest and incorrectly at posttest
Correct to incorrect = item answered correctly at pretest and incorrectly at posttest

*p ≤ .05