Published in final edited form as:

J Natl Med Assoc. 2008 June ; 100(6): 674–682.

Using Focus Groups to Adapt Ethnically-Appropriate, Information-Seeking and Recruitment Messages for a Prostate Cancer Screening Program for Men at High Risk

Charlene J. Bryan, PhD, MPH¹, Lindsay Wetmore-Arkader, MA², Tammy Calvano, MA^{1,3}, Janet A. Deatrck, PhD, RN, FAAN¹, Veda N. Giri, MD³, and Deborah Watkins Bruner, RN, PhD^{1,2}

¹School of Nursing, University of Pennsylvania, Philadelphia, PA

²Abramson Cancer Center, University of Pennsylvania, Philadelphia, PA

³Fox Chase Cancer Center, Philadelphia, PA

Abstract

Purpose—To adapt ethnically appropriate radio and newspaper messages in order to increase information seeking and recruitment to a high risk Prostate Cancer Risk Assessment Program (PRAP) using input from focus groups.

Methods—We conducted 4 gender-and ethnic specific- focus groups composed of up to 8 participants each. Group participants ranged in age from 35-69 and were either at risk for prostate cancer or were married to someone at risk. Participants evaluated both print and radio advertisements for a PRAP media recruitment campaign and their recommendations were used to adapt the advertisements.

Results—“Trigger words”, e.g., “research program” were found to be a particular issue for African American men who cited concerns about “experimentation”, while the other groups cited concerns about time commitments and cost. In the print messages, familial themes garnered an overall favorable response, but Caucasian American (CAs) participants responded negatively to the use of photos of age appropriate models.

Conclusion—Focus groups are useful in checking health professional assumptions about health messages prior to developing awareness or recruitment advertisements or materials. There was an implied preference for “younger” models among CAs. Radio and print messages were adapted using the focus group recommendations, i.e., focusing on familial themes, adding race specific risk estimates, and using younger-than-target group models.

Keywords

Prostate cancer; Minority populations; Information seeking; Prostate cancer screening program; Healthcare message framing

Introduction

Within the US, minorities bear a disproportionate cancer morbidity and mortality burden.(1) African American (AA) men die of prostate cancer at 2.5 times the rate of Caucasian American

(CA) men. The reasons for these disparities are influenced by a host of clinical (e.g., differential screening rates, physician characteristics),(2,3) biological (e.g., genetic susceptibility)(4) and socioeconomic (e.g., access to care and advanced treatments) factors.(4,5)

Prostate cancer is potentially curable if detected and treated early. Detection methods include the prostate specific antigen (PSA) test(6) alone or in combination with the digital rectal examination (DRE). There is a dearth of definitive data on the utility of screening for prostate cancer with the PSA and the DRE and on preventive options in improving health outcomes for high-risk men.(7,8) Clinical guidelines for prostate cancer screening vary considerably among professional organizations,(9,10) but most encourage clinicians to discuss the screening tests, especially with high risk patients and across ethnic groups. However, some professional organizations caution that the potential benefits of preventative screening do not outweigh the risks, e.g., psychological impact from false positives, infection or rectal bleeding, financial cost and time commitments.(10,11)

AA men have a high risk of prostate cancer, yet they have low prostate cancer screening rates.(12,13) It is not surprising that given the lack of consensus within the medical community about the benefits of screening, an inherent suspicion of the medical establishment and the practicalities of insurance costs and access to screening, that AA men are reluctant to participate in cancer control and screening programs. However, despite its present ambiguities, preventative screening for prostate cancer does provide some benefits, e.g., increased vigilance in high risk populations,(10) which in turn, can result in prostate cancer being detected in its localized stages when the outcome can potentially be more favorable.(14)

The approach that has been recommended by the medical community is to enable patients to make informed decisions through prostate cancer screening education.(15) However, in order to educate, awareness of the opportunity to gain information is required. Although clinical and research recruitment campaigns are sometimes guided by learning models, little attention has been paid to one critical requirement: how to reach key target audiences with persuasive messages and hold their attention long enough for the messages to be processed. In particular, little scientific rigor has been applied to the study of methods to increase information seeking and to improve the recruitment of minorities into cancer control or treatment trials.(16) Few studies utilize theory to guide the development of measures and test the validity and reliability of measures in ethnically diverse populations.(16) Instead, the focus of investigators has been on improving the cultural relevance of research methods. Without emphasis on issues related to recruitment, even the most innovative research is stymied by the lack of representative samples of the population the research is designed to serve.

We conducted 4 focus groups as part of a larger research program, which seeks to systematically and prospectively test ethnically and culturally appropriate health risk communication methods that would increase information-seeking, and the recruitment of men into a prostate cancer control program for high-risk men, the Prostate Cancer Risk Assessment Program (PRAP). PRAP was designed to help reduce health disparities among ethnically diverse men. This program ultimately seeks to improve informed decision making through information-seeking, recruitment, retention and outreach for the underserved. Information-seeking is a crucial part of health promotion and also of the recruitment process. The main objective of these focus group sessions was to obtain recommendations from ethnic and gender specific groups on radio and print advertisements and to utilize the recommendations to adapt messages that encourage information seeking and recruitment for PRAP.

Methods

In this qualitative descriptive study, we conducted 4 focus groups in November 2006 as part of the Prostate Risk Assessment Program (PRAP), an ongoing screening and educational campaign targeted at increasing awareness of prostate cancer risk in AA and CA men in the catchment area of the Fox Chase Cancer Center in Philadelphia, Pennsylvania. Focus groups provided a format for participants to provide both spontaneous reactions and then to reflect and provide input into a series of ethnically targeted radio and newspaper advertisements focusing on prostate cancer screening.

The focus groups were ethnic- and gender-specific, e.g., AA women only (7 participants), CA women only (8 participants), AA men only (5 participants) and CA men only (8 participants). All participants were aged 35-69 and either at risk for prostate cancer (AA men) or had a family history of prostate cancer (CA men) or have a spouse/domestic partner who was at risk (both AA and CA women). The recruitment eligibility and a scripted recruitment guide were developed by PRAP research staff and administered by Focus Suites, Inc., a professional conferencing institution, in Philadelphia, Pennsylvania. Focus Suites, Inc., maintains a database of potential focus group participants and identified potential participants who met study eligibility criteria within the database. Recruiters contacted potential participants by telephone, invited them to participate and scheduled the participants for the appropriate focus group. The participants received a \$75 incentive at the conclusion of each group session. All procedures were reviewed and approved by the Institutional Review Boards at the University of Pennsylvania and Fox Chase Cancer Center.

Focus group procedures followed the methods established by Kreuger and Casey (2000)(17) and included a moderator, 2 observers who took notes on the focus group proceedings and post session debriefings. A maximum of 8 eligible volunteers per focus group was invited to attend. This was in agreement with Kreuger and Casey's *Focus Groups*, where the authors state that the size of typical focus group can range from 4 to 12 participants.(17) All participants were consented prior to the start of the session. Each focus group was approximately 2 hours in length and audiotaped.

The moderator used a series of probes to guide each focus group session.(18,19) The interview guide was designed using the recommendations of Clotaire Rapaille's *The Culture Code*,(20) to capture opinion information on the topic of prostate cancer and specifically on radio and print advertisements designed for the PRAP media campaign. The interview guide contained initial probes to elicit "gut" reactions to key words. Tapping into initial "gut" reactions to the advertisements versus only what participants say after reflection is important, according to Rapaille, because it is what people feel, not what they say, that motivates action. Rapaille emphasizes that differences in cultures lead to the processing of the same information in different ways. To delve into these differences we need to try and pull from participants the feelings a given stimuli evokes that was learned or 'imprinted' early in development within their given culture.(20) After the initial probe, participants were asked to carefully evaluate the advertisements and to categorize their opinions as "likes" and "dislikes". The moderator encouraged input from all members of the group. A sample of the focus group questions is presented in Appendix A.

All audiotapes were transcribed verbatim by a professional transcriptionist and the transcripts were checked against the recordings by PRAP team members for accuracy. Detailed notes taken during the focus group sessions were used to augment the transcripts of the audio-recordings.

Qualitative content analysis proceeded in a systematic manner.(21) First, initial codes were generated by team members through independent study and analysis of the transcripts. Second,

codes were then discussed and condensed into categories. Third, two team members separately applied the list of categories to the transcripts. The transcripts were reviewed twice by team members for accuracy. The fourth and final step was the upload of transcripts into the Qualitative Data Management Software package, Atlas.ti™, for additional analysis. Final analysis identified points of agreement and difference among the groups.

Scientific rigor was strengthened by common procedural guidelines for trustworthiness in qualitative descriptive studies.(22,23) Credibility of the results were supported through use of data from 4 focus groups with carefully chosen membership, as well as a team of researchers who are diverse in terms of scientific and clinical expertise and racial and ethnic backgrounds. Dependability of the findings was strengthened through iterative stages of data analysis performed by multiple team members both separately and together. Confirmability of the results was reinforced through use of an audit trail in which investigators recorded the process of data analysis. Finally, transferability of the findings is sustained through this description of the methods and findings that will enable the reader to decide their applicability to other settings and situations.

Results

The results from the preliminary analyses show that both AAs and CAs had similar likes (Figure 1a) and dislikes (Figure 1b) about the format and presentation of information about prostate cancer and prostate cancer screening and similar responses to familial and empowerment themes. All 4 groups offered similar suggestions on improvements to the radio and print advertisements. Common suggestions across groups are presented in Figure 1c.

Points of Agreement

Response to Probes—Participants all associated the probe 'prostate cancer' with negative connotations, i.e. fear, death, decreased sexual performance and shame. Participants made the following comments in response to the probe 'prostate cancer':

- "...Male. Older male. [pause]... I guess my introduction is with black men, older black men that I've known that had contracted this disease."
- Frequent urination, decreased sexual performance, shame, or embarrassment, lack of wanting to...denial, actually, is what I think of, and of course, men. Fathers...."

The probe 'prostate cancer screening' engendered similar responses across the 4 focus groups. Generally it was considered to be necessary, wise and preventive and participants all appeared to appreciate the importance of screening for prostate cancer.

"...Yes, wise decision to make to get that screening every year..."

Presentation of Information—There were repeated requests for additional information about prostate cancer, especially about possible 'signs and symptoms' and risk estimates. Participants were sensitive to a lack of pertinent information in advertisements and also to being inundated with information (both print/radio).

"...It's too wordy but it's wordy about the wrong thing."

They requested condensed information delivered in 'bullet' format. AAs also requested more information about risk factors and ethnic specific risk estimates.

"...The other thing like I said I identified with one of the things is, if African American men have a higher risk, I would kind of like to get some of the numbers just one stat... Just one. Not a whole lot 'cause after two I won't remember but give me one good one..."

Costs to Screening—All 4 groups mentioned concerns about costs, e.g., insurance coverage for screening, the time required (e.g., burden) and the level of commitment necessary for participation in any prostate cancer screening program. Participants made the following comments related to their concerns about costs to screening and commitment necessary for participation:

- “...The first question that came to my mind was it covered by our health insurance? That's out of normal route that we travel to go to our primary physician and to go to Fox Chase would be, outside the HMO..., it probably would be expensive.”
- “...I don't know, I really hadn't paid that much attention to it but now that she said that I mean, yeah I do see that, and to me it does make a big difference, that, okay just go in and out, the screening and all, meanwhile, wait a second, program? Okay. I would kind of think about it twice. What's involved in that?”

Some of the AA men were concerned that many AAs are uninsured and would be unable to afford health care, even preventative care, such as prostate cancer screening.

“... A lot of people don't have health insurance, they don't have adequate health insurance. So, what people do a lot of times is just don't deal with those situations that cause them to have to spend money unless it's an absolute emergency `cause we don't have the health insurance and I don't know whether it's a myth or reality but you can't walk into a health center and get a prostate exam for free...”

Incentives—There was interest in incentives, i.e., the free video that was offered as part of PRAP, which made participation more appealing across all of the groups.

“...the free tape for symptoms and for risk factors, I would have called for that because that's something that sort of doesn't require anything of my husband, I can just get it for him and he can watch it. He doesn't actually have to do anything...”

Additionally, some CA men were also interested in the nutrition education component of PRAP.

“...I was curious with the nutrition piece and some of the other lifestyle things `cause I'm like virtually ignorant about that as regards to prostate cancer but once again, I would run to Google and probably see “oh, nutrition, what's that got to do with this.” So, it created an interest enough to probably do a Google on it...”

Targeting the audience—Participants were unanimous in their suggestions that the placement of the advertisements be gender specific for male and female audiences, e.g., newspaper sports sections for males. The use of celebrities as spokespersons to raise awareness was also suggested.

“But if you really want to get to the men, like they said Sports Illustrated. Gotta have a jock, somebody who's been through it...”

Familial Themes (graphic/textual) and Empowering Text—These engendered overall positive responses from the participants, who expressed a connection with the material through the use of family themes, either graphic or textual. These were also perceived as potential motivators by the participants. The following are some examples of the positive responses made by the participants:

- “...This really grabs the community I think. It grabs the uncle, it grabs the nephew, it grabs the husband, it grabs the dad, it grabs the granddad `cause you see generations there...”

- "...I like underneath the wife here, `his health is important to me. I want both of us to be here for our family.' I think that's a great, great blurb..."

Participants also responded positively and strongly to the use of empowering text, e.g., "Do It!" or "Take Charge of Your Prostate Cancer Risk." Some examples of the participants' responses are:

- "...I like the do it for your family and for yourself. I like that a lot, for the `do it for your family.' I especially like that, for your family, for yourself..."
- "...I especially like the title, `take charge of your prostate cancer risk.' The reason I like the title so much is that everybody doesn't necessarily...everybody doesn't necessarily, might not have any symptoms but I like the fact that you're empowering me to be in control of what might happen..."

"Trigger words": "research program" or "research study"—Participants responded negatively to the use of the "trigger words", such as, "research program" or "research study". There was a general reluctance expressed by all groups towards participation in the research process, but the reasons for the reluctance varied. AA men responded negatively and discussed feeling of wariness and fear of "experimentation" or being a "guinea pig".

"...That's the whole thing about the Tuskegee thing, it goes back to that. They might be experimenting on `em or trying to come up with a cure for prostate cancer and they're using us as guinea pigs, I don't know..."

Both AA women and CA women, as well as CA men also responded negatively to research studies. However, in contrast to AA men, they cited concerns about time commitments and insurance coverage.

"You feel like you're being roped into something that's gonna cost you a lot, a lot of time."

Points of difference

Use of age-appropriate models in pictures—CA men and women both responded negatively to the age of the models in the print advertisements. In contrast AA women and men did not. CA participants indicated that they did not identify with the individuals in the photos (although participants were approximately the same age as those pictured) which would prompt them to ignore or pass over the advertisements. The following are examples of the different responses from the CA and the AA groups:

- "...They're older and I just wouldn't feel that it was directed at my husband...Or me or whatever. I would think I don't even have to look at this."
- "...He looks older than 69 ..."
- "...They look more like my parents' generation."

"...I actually like the ad because this ad seems to be targeted to me, a more mature couple. They look like they're in their prime, they're healthy, they don't have the challenges of small children, they're set in their careers. It's something that I might really be interested in because I'm healthy, my husband's healthy, and we're talking about taking charge and making sure that the risk factors are down..."

Media type preference—CA women were more responsive towards the use of the radio advertisements and CA men were ambivalent, expressing no clear choices. Both AA men and women generally preferred the printed format, citing the ease and ability to revisit the

information and the time to peruse. The following is an example of a response made by an AA female participant:

“...Because all the information is there, I don't have to worry about running to get a pen to try to get the number down from the commercial. I can just show it to him, ‘look honey, you wanna stay like this?’ You know, [I feel like with] the commercial, we could miss it. ‘What was they saying?’ I'd rather have like she said the paper in my hand...”

Discussion

Ethnic diversity in recruitment is a vital prerequisite to eliminating the health disparity gap in cancer control trials and health promotion programs. In the past, little attention had been paid to targeting the key audiences with persuasive messages and holding their attention long enough for the messages to be processed. Some successful recruitment strategies for minorities have been documented with the use of media to deliver appealing and culturally sensitive messages to minorities.(24)

We conducted ethnic and gender specific focus groups to obtain recommendations on radio and newspaper advertisements in order to develop culturally sensitive and targeted radio and print advertisements designed to promote information-seeking about and participation in a prostate cancer screening program for high-risk men. Several common recommendations from the groups included: 1) condensation of the message content and use of a different message format, 2) use of familial and empowering themes and 3) use of age-younger-than-target-audience models as identified by participants.

In general participants expressed a willingness to receive information, i.e., free CD/DVD about prostate cancer. Both AA and CA women repeatedly mentioned that they wanted to be informed in order to relay the information to their partners. This is in keeping with what has been previously observed in the medical literature where traditionally women have been perceived as the ‘health gate-keepers’ within family groups and were more likely to consult with medical providers.(25,26)

The use of terms such as “research program” and “research study” triggered negative responses from the focus group participants. In general, all participants expressed a wariness to participate in medical research. While both AA and CAs expressed concerns about the time commitment of research participation, AA men in particular expressed concerns about “experimentation.” This is not unexpected given the historical exploitation of minorities in medical experimentation, as demonstrated in the Tuskegee study of untreated syphilis in the AA males (27) and the more recent Baltimore Lead Paint study.(28) Further, these studies are concordant with a recent telephone survey which examined racial differences in knowledge of the Tuskegee study and the relationship between that knowledge and medical mistrust. Participants were 277 AAs and 101 CAs from Baltimore, MD. There was no difference by race in knowledge of the Tuskegee study and knowledge of the study did not predict medical mistrust. AAs did have greater mistrust in the medical system but the authors suggested the differences in mistrust may be related to a broader historical context and personal experiences.(29). This is also in keeping with a national survey which indicated that 63% of AAs as compared to 38% of CAs studied thought doctors often prescribe medication to experiment on people without their permission. The same study also demonstrated that nearly 25% of African-Americans as compared to 8% of Caucasians thought their own doctor had given them treatment as part of an experiment without their consent.(30)

CA men suggested not using the words “research program” or “research study” and also expressed a reluctance to participate. These suggestions highlight conflicting preferences and

one of the difficulties inherent in tailoring health messages. Researchers have an ethical responsibility to educate their target audience and fully disclose research protocols but do so at the risk of realizing low accrual to their studies. Focus groups can play a vital role in the development of health promotion materials which convey health information in an ethical manner that still hopes to motivate subjects to at least seek more information before making a decision.

Contrary to the literature regarding general public lack of understanding of risk estimates, all groups strongly suggested estimates of risk were needed to motivate a response.(31-33) This suggestion was incorporated into the adapted advertisements but may bear further study to determine if risk estimates only lead to confusion and misunderstanding or improved knowledge for decision making.

A key difference between AAs and CAs was the response to the use of age appropriate models in the print advertisements. AAs responded positively to the use of age-similar models while CAs responded negatively. This difference is not unfamiliar to what had been observed in a number of studies on age perception which have been conducted outside the US.(34-36) Uotinen (1998)(34) in a comparison of North American and Finnish men and women found that North Americans identified with a more youthful age identity compared to the Finnish group. Guiot (2001)(36) and Barak (2001)(35) respectively found that the French and East Asians also identified with a more youthful age group. This was found to be consistent with the PRAP focus group findings. Irrespective of gender, the CA groups were more sensitive to the use of specific photos and models as they related to age. These issues were not noted in the AA groups, although it is important to note that no specific probes, beyond “what did you like/dislike about this ad” were utilized to solicit such response. There has been little focus within the literature on age identification within specific ethnic sub-groups, such as AAs and/or CAs in the US. Much of the research has been conducted on body image in AA and CA women, but not as it relates to age identification or health messaging.

The main limitation of this study was the small number of focus groups that were conducted and the utilization of a professional focus group recruitment service, which may have decreased the representativeness of the study participants and their viewpoints. However, this is one of the disadvantages of focus group data in general. We attempted to minimize these limitations by: 1) the selection of participants from the same catchment area, 2) the composition of the focus groups, i.e., gender- and ethnic-specific and 3) the use of a structured interview guide and a trained moderator.

Overall, participants were willing to receive information on a prostate cancer screening program for high-risk men but were wary due to either concerns about cost, time commitment (e.g., burden) or distrust in participating in a research screening program. The recommendations from the focus group participants were used to revise radio and print media for PRAP. An example of one of the print advertisements developed using focus group input is shown in Appendix B. Note the incorporation of focus group suggestions including: 1) the use of empowering text, 2) the use of multi-generational pictures of families; 3) the delivery of condensed information using bulleted points, and 4) the provision of ethnic-specific risk estimates in AA-targeted print advertisements. The impact of these recommendations on information seeking and recruitment will be assessed in future quantitative studies that are presently underway as part of the PRAP research program.

Conclusion

In order to increase the uptake of health-promoting interventions designed to reduce health disparities among ethnically diverse populations, effective methods of communication are required to provide the stimuli that will lead to informed decision making and recruitment into

clinical trials and/or health-promotion programs. Understanding key positive motivators, e.g., use of familial themes, the importance of identification with models in pictures, as well as key negative motivators, e.g., emotions triggered by requesting participation in research, is instrumental to the development of effective health messages. Focus groups can play a key role in providing feedback to assess that messages motivate information-seeking as intended, especially among ethnically diverse populations.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Financial Acknowledgement

This research was made possible by a grant from the National Cancer Institute, entitled, Ethnic Differences in Media Response and Recruitment.

REFERENCES

1. Ries, L.; Melbert, D.; Krapcho, M., et al. SEER Cancer Statistics Review, 1975-2004. National Cancer Institute; 2007.
2. Bach P, Pham H, Schrag D, et al. Primary care physicians who treat blacks and whites. *New England Journal of Medicine* 2004;351(6):575-584. [PubMed: 15295050]
3. Schavers VL, Brown ML. Racial and ethnic disparities in receipt of cancer treatment. *JNCI* 2002;94(5):334-357. [PubMed: 11880473]
4. Powell I. Epidemiology and pathophysiology of prostate cancer in African-American men. *J Urol* 2007;177(2):444-449. [PubMed: 17222606]
5. Ward E, Jemal A, Cokkinides V, et al. Cancer disparities by race/ethnicity and socioeconomic status. *CA Cancer J Clin* 2004;54(2):78-93. [PubMed: 15061598]
6. Catalona W, Smith D, Ratliff T, et al. Measurement of prostate-specific antigen in serum as a screening test for prostate cancer. *N Engl J Med* 1991;324(17):1156-1161. [PubMed: 1707140]
7. Reynolds T. Experts question validity of PSA testing for life insurance policies. *Journal of the National Cancer Institute* 2001;93(13):968-970. [PubMed: 11438555]
8. Gates T. Screening for cancer: Evaluating the evidence. *American Family Physician* 2001;63(3):513-522. [PubMed: 11272300]
9. Cooper CP, Merritt TL, Ross LE, et al. To screen or not to screen, when clinical guidelines disagree: primary care physician's use of the PSA test. *Preventative Medicine* 2004;38:182-191.
10. Gwede C, McDermott R. Prostate cancer screening decision making under controversy: implications for health promotion practice. *Health Promot Pract* 2006;7(1):134-146. [PubMed: 16410430]
11. Albertsen P. PSA Testing: Public Policy or Private Prejudice? *Journal of the American Medical Association* 2006;296(19):2371-2373. [PubMed: 17105802]
12. Myers R. African American men, prostate cancer early detection examination use, and informed decision-making. *Semin Oncol* 1999;26(4):375-381. [PubMed: 10482180]
13. Weinrich SP. Prostate Cancer Screening in High-Risk Men: African American Hereditary Prostate Cancer Study Network. *Cancer* 2006;106(4):796-803. [PubMed: 16411222]
14. Giri V, Beebe-Dimmer J, Buyyounouski M, et al. A ten-year update of cancer detection. *Journal of Urology*. 2007in press
15. Braddock, Cr; Edwards, K.; Hasenberg, N., et al. Informed decision making in outpatient practice: time to get back to basics. *Journal of the American Medical Association* 1999;282(24):2313-2320. [PubMed: 10612318]
16. Mullen P, Allen J, Glanz K, et al. Measures used in studies of informed decision making about cancer screening: a systematic review. *Annals of Behavioral Medicine* 2006;32(3):188-201. [PubMed: 17107291]
17. Kreuger, D.; Casey, MA. Focus groups: A practical guide for applied research. Vol. 3rd ed. Sage Publications, Ltd.; Newbury Park, CA: 2000.

18. Cote-Arsenault D, Morrison-Beedy D. Maintaining your focus in focus groups: Avoiding common mistakes. *Research in Nursing & Health* 2005;28:172–179. [PubMed: 15779066]
19. Ruff C, Alexander I, McKie C. The use of focus group methodology in health disparities research. *Nursing Outlook* 2005;53(3):134–140. [PubMed: 15988450]
20. Rapaille, C. *The Culture Code*. Broadway Books, A division of Random House, Inc.; New York, NY: 2006.
21. Hsieh H-F, Shannon S. Three approaches to qualitative content analysis. *Qualitative Health Research* 2005;15(9):1277–1288.
22. Guba E. Criteria for assessing the trustworthiness of naturalistic inquiries. *Educational Communication and Technology Journal* 1981;29(2):75–91.
23. Guba, EG.; Lincoln, YS. Competing paradigms in qualitative research. In: Denzin, NK.; Lincoln, YS., editors. *Handbook of Qualitative Research*. Sage Publications, Ltd.; Thousand Oaks, CA: 1994. p. 105–117.
24. Story M, Sherwood N, Abarzanek E, et al. Recruitment of African-American pre-adolescent girls into an obesity prevention trial: The GEMS pilot studies. *Ethnicity & Disease* 2003;13(1 Suppl1):S78–87. [PubMed: 12713213]
25. Nicholas DR. Men, masculinity, and cancer: Risk-factor behaviors, early detection, and psychosocial adaptation. *Journal of American College Health* 2000;49(1):27–33. [PubMed: 10967881]
26. O'Brien R, Hunt K, Hart G. "It's caveman stuff, but that is to a certain extent how guys still operate": Men's accounts of masculinity and help seeking. *Social Science and Medicine* 2005;61(3):503–516. [PubMed: 15899311]
27. Roy B. The Tuskegee syphilis experiment: medical ethics, constitutionalism, and property in the body. *Harv J Minor Public Health* 1995;1(1):11–15. [PubMed: 11656513]
28. Lewin T. U.S. Investigating Johns Hopkins Study of Lead Paint Hazard. *New York Times*. 2001
29. Brandon D, Isaac L, LaVeist T. The legacy of Tuskegee and trust in medical care: Is Tuskegee responsible for race differences in mistrust of medical care? *J Natl Med Assoc* 2005;97(7):951–956. [PubMed: 16080664]
30. Corbie-Smith G, Thomas SB, Williams MV, et al. Attitudes and beliefs of African Americans toward participation in medical research. *Journal of General Internal Medicine* 1999;14(9):537–546. [PubMed: 10491242]
31. de Bruin W, Fischhoff B, Millstein S, et al. Verbal and Numerical Expressions of Probability: "It's a Fifty-Fifty Chance". *Organizational Behavior and Human Decision Processes* 2000;81(1):115–131. [PubMed: 10631071]
32. Denes-Raj V, Epstein S, Cole J. The generality of the ratio-bias phenomenon. *Personality and Social Psychology Bulletin* 1995;21(10):1083–1092.
33. Slovic P, Monahan J, MacGregor D. Violence risk assessment and risk communication: the effects of using actual cases, providing instruction, and employing probability versus frequency formats. *Law and Human Behavior* 2000;24(3):271–296. [PubMed: 10846372]
34. Uotinen V. Age identification: A comparison between Finnish and North-American cultures. *International Journal of Aging and Human Development* 1998;46(2):109–124. [PubMed: 9572351]
35. Barak B, Mathur A, Lee K, et al. Perceptions of age-identity: A cross-cultural inner-age exploration. *Psychology and marketing* 2001;18(10):1003–1029.
36. Guiot D. Antecedents of subjective age biases among senior women. *Psychology and marketing* 2001;18(10):1049–1071.

LIKES**CA** **Figure 1a.**

Common categories among different ethnic and gender-based focus groups related to preferences for media and prostate cancer screening messages.

DISLIKES

Figure 1b.
Common categories among different ethnic and gender-based focus groups related to dislikes in prostate cancer screening messages.

SUGGESTIONS

Figure 1c.

Common suggestions among different ethnic and gender-based focus groups related to issues they would like mentioned in prostate cancer screening messages.