The potential influence of masculine identity on health-improving behavior in midlife and older African American men

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Abstract

Objective: To gain a greater understanding of masculinity and its potential influence on healthimproving behavior in midlife and older African American (AA) men.

Methods: Forty-nine AA men aged 45–88 years completed in-depth interviews to ascertain their perspectives on masculinity, how masculine identity in this population might be influenced by age and physical activity level, or how it might impact health. Taped interviews were transcribed and organized for analysis with common themes identified by multiple researchers.

Results: Most often cited attributes of someone considered "manly" included a leader of a family/ household, provider, strong work ethic, and masculine physique. Terms such as responsible, principled, and man of character also described the typical man. Potential negative and positive influences of manhood on health included avoiding health care appointments and being a good example to children/ others, respectively. Themes associated with age-related changes in manhood were acceptance and being more health conscious. Elements associated with how manhood was influenced by AA race included stress and perseverance.

Conclusions: Midlife and older AA men in this study primarily expressed views of masculinity that fit the traditional perception of manhood. However, the attributes revealed, such as family provider, responsibility, self-reliance, and perseverance, were viewed as having potential for both negative and positive impacts on health and health-improving behaviors. It will be essential to integrate these prevalent attributes of masculine identity into health promotion interventions such that they facilitate positive behavior change while not competing with gender role norms among this vulnerable group of men. © 2012 WPMH GmbH. Published by Elsevier Ireland Ltd.

Keywords

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Introduction

Men who endorse traditional beliefs about manhood or dominant norms of masculinity engage in poorer health-related behaviors and have greater health risks than men who hold less traditional beliefs [1–5]. For example, research across different racial and ethnic groups has consistently found that men with traditional views of manhood are less likely than women, to perceive themselves at risk for illness; believe they have internal control over their health; contemplate changing unhealthy habits; and utilize health care [1,3-9]. The term hegemonic masculinity defines ideal masculine attributes, as well as broader aspects of patriarchal societies [10]. Power, wealth, physical strength, emotional control, self-sufficiency, and virility represent the dominant cultural ideal for men in the United States [11,12].

The prevailing North American cultural beliefs that men are independent, self-reliant, strong, and resilient, interact with other factors, such as age and social conditions, to influence attitudes towards health behavior in men [13]. For example, physical activity (PA) programs comprised of recreational sports may be more attractive to some men who may perceive less strenuous PA, such as walking, to be primarily for women. However, this perception may be tempered in midlife, when older men have been found to be less likely to endorse dominant cultural norms of masculinity [14]. A greater understanding of masculinity in midlife and older men, and its influence on health behavior, will help foster the formation of gender-specific health promotion interventions for this population.

African American (AA) men suffer a disproportionate burden of preventable morbidity and mortality with an average lifespan of 6-11 years less than others [1,15]. Correspondingly, AA men have significantly greater odds than white men for coronary heart disease, hypertension, stroke, cancer, and diabetes [16-18]. A variety of factors contributing to the health disparities observed for AA men have been identified [1]. In addition to such factors as socioeconomic status, health care access, and environment, health behaviors - such as smoking, alcohol use, nutrition, and PA partially account for the results [1,2,19]. The interaction of masculinity and other social factors (e.g., racial discrimination and mistrust of physicians) have also been identified as important factors in AA men that underlie unhealthy lifestyles and perceived lack of interest in improving health [1,20-23]. These factors, in turn, are associated with poor health outcomes and reduced longevity in AA men.

The purpose of this study was to (1) ascertain perspectives on masculinity in AA men aged 45–84 years, (2) determine if these perspectives vary by age or PA behavior, (3) identify the potential influence these views may have on health, and (4) distinguish how these perspectives may be applicable to engaging older AA men in community-based health promotion.

Methods

This study was conducted in Columbia, South Carolina, USA with study procedures approved by the Institutional Review Board at the University of South Carolina. A Community Advisory Board (CAB) of five AA men from various professions and four academicians with expertise in health communication, communitybased research, and men's health assisted with developing interview questions, identifying recruitment strategies, and interpreting findings. Recruitment strategies included targeted announcements to county departments on aging, senior centers, senior residential communities, churches, and participants in previous research projects; listsery postings to University employees; mass communication; and word of mouth. Eligibility criteria were being an AA male (self-identified) between the ages of 45 and 88 years. Based on self-report PA questions from the Behavioral Risk Factor Surveillance System, participants were categorized as either meeting (>150 minutes per week of moderate to vigorous intensity PA) or not meeting (<150 minutes per week of moderate to vigorous intensity PA) recommendations for PA [24,25].

Each interviewee completed an informed consent form and personal demographic and medical history questionnaire prior to the interview. A brief masculine identity survey was completed to assess participants' attitudes about being a man [11]. For one question, participants rated how true ("not at all true" to "very true") they believed that taking risks that are sometimes dangerous is part of what it means to be a man and what distinguishes men from women. For four other questions, they rated how important ("not at all important" to "very important") it was as a man to (1) be self-sufficient and always try to handle problems on your own, (2) be physically strong and tough, (3) control your emotions and never to reveal sadness or vulnerability, and (4) not engage in activities that you think others might consider feminine. Responses to each item received a score of 1-4 and a total masculine identity score (range 5-25) was compiled.

Interviews were conducted within these groups: (1) 45-64 year old AA men meeting PA recommendations (n = 17); (2) 45–64 year old AA men not meeting PA recommendations

(n = 12); (3) 65–84 year old AA men meeting PA recommendations (n = 10); and (4) 65–84 year old AA men not meeting PA recommendations (n = 10). The interview guide, which was partially derived from a similar instrument used previously with AA women aged 35-54 years [26] and finalized with input from the CAB, contained questions about general health, masculine identity, and PA preferences, benefits, barriers, and facilitators. The complete interview guide was pilot tested with three AA men of the same age as study participants. Two members of the research team (EB and CR), who had been involved with the development and pilot testing of the interview guide and who had several years of qualitative research experience, conducted all of the interviews.

Specific to masculine identity, participants were asked to think of someone they considered manly or a typical man, and to describe what made that person manly. They were also asked how the concept of manhood changes with age, impacts health, and is influenced by AA culture or traditions. Participants were not prompted by the moderator with sample responses. However, moderators probed participants with follow-up questions about their responses if additional detail was needed.

Qualitative Data Coding and Analysis

Audio recordings of the interviews were transcribed verbatim into Microsoft Word. Transcripts were edited to remove personal identifiers and text files were entered into QSR NVivo7 [27], a qualitative data management program. The interview questions guided codebook development. A pair of coders used this initial codebook to review one interview transcript and independently assign codes to sections of interview text, modifying and adding codes as needed. This approach was completed with four additional interviews prior to finalizing the codebook. During this "open coding" process, consensus was reached about the definition of each code and a list of codes was agreed upon. Inter-rater agreement of at least 85% between coders was considered an acceptable threshold for coding consistency. Inter-rater percent agreement within the 70-90% range has been reported to be appropriate for qualitative coding [28,29]. All transcripts were then coded with the finalized codebook. "Axial coding", or the connecting of codes and identifying relationships between codes suggestive of themes (i.e. topics discussed frequently), was also conducted. Finally, comparing and contrasting these emerging themes within and across the interviews was used to detect similarities and differences in the data [30].

Total masculine identity scores for combinations of age and PA were compared using independent *t*-tests (P < 0.05).

Results

Forty-nine AA men were interviewed. Overall, participants were married, had a high school or college education, had an annual income of >\$50,000, were overweight or obese, reported having at least one chronic medical condition, and self-rated their health as good to excellent (Table 1). Mean masculine identity scores for each group ranged from 13.5-14.9 on the 5-25 point scale with no significant differences noted by age or PA. Participants' quotes typifying themes and subthemes are provided in Table 2.

Description of the typical man

Most often cited attributes of someone considered manly included leader of a family/household, role model/mentor, strong work ethic, and masculine physique. With respect to leader of a family/household, the concepts of making a living, being a provider, maintaining order, and assuring protection, comfort, and safety were mentioned. One of the primary subthemes that emerged was "responsibility"; being responsible for the family and one's self. AA men frequently stated other personal attributes such as principled, man of God, compassionate, honest, loving, caring, selfless, and wise. In essence, being a man of character and faith was considered an important component of manhood.

Many attributes of a physical nature also described the typical man. Most common were sexual prowess, strong, well-dressed, athletic, and active. In sum, AA men in this study viewed the typical man as one with a masculine physique who carried himself with confidence. Interestingly, this more traditional view of masculine identity was more apparent in the responses from physically inactive men compared with active men.

Table 1 Participant demographics.

			Middle-aged active (n = 17)	Middle-aged inactive (n = 12)	Older active (<i>n</i> = 10)	Older inactive (n = 10)
Age	Years	Mean <i>SD</i>	54.1 5.7	51.9 4.6	74.9 5.0	72.3 8.1
Marita	Marital status					
	Married/partnered Not married	% %	65 35	67 33	80 20	80 20
Educat	Education					
	High school/GED or lower	%	24	25	60	30
	Some college or college graduate	%	77	75	40	70
Emplo	yment status					
	Employed	%	47	83	10	20
	Unemployed	%	53	17	90	80
Income						
	< \$29,999	%	31	17	50	25
	\$30,000–59,999	%	25	33	30	25
	>\$60,000	%	44	50	20	50
Health	conditions	0.4	40		40	40
	Diabetes	%	40	8	40	40
	High blood pressure	%	59	33	90	50
	Angina	%	6	17	20	10
	Arthritis	%	18	33	50	20
	Other	%	7	33	33	56

Changes in manhood with age

Most of the men responded that age-related changes in health and physical capacity created a change in self-perceived masculinity. For example, men reported feelings of "acceptance," "relaxation," and "letting go" in relation to physical alterations associated with aging. Some expressed a certain futility that comes with aging. Reflecting this majority view, one man stated, "I'm too old to do anything about it anyway." In contrast, several men highlighted positive changes with aging such as getting smarter/wiser, as well as becoming more health conscious and embracing healthier behaviors over time.

The perceived role of race on manhood

A majority of the men did not believe that masculinity differed between men of varying races or ethnicities. One participant's statement exposed this commonly expressed perspective: "I don't think that it [i.e., race/ethnicity] would have anything to do with it. A man is a man." However, for those who did report differences, two subthemes emerged: perseverance and stress. Some men stated that within the AA community, the attitude of never giving up/ quitting is embraced. Another comment was that midlife and older AA men have faced greater racism during their lives. This form of oppression (real or perceived; intentional or unintentional) leads to stress that some men handle poorly, yet others adapt by developing a "don't quit" attitude. Another contributor to stress in AA men's lives is related to the role of provider. These men commented that working hard and taking responsibility to provide financially for the family wore down the body, created stress, and caused health problems, and this leads to further stress.

The influence of manhood on health

The vast majority of responses to this query could be assigned to either a negative or positive influence. The negative influence masculinity could have on health was associated with terms such as "tough," "macho," "stubborn," and "reckless." Men reported that the concept of being a man led one to hide any signs of pain

Table 2 Select quotes typifying emergent themes of masculine identity from interviews with African American men 45-84 years of age.

Description of the typical man

Leader of family/household; provider; responsibility; role model/mentor

"A man to me is a person willing to do four things. Protect, provide, sustain and maintain his household and family. That to me is man."

"Now, if you've got a family, take care of his family and basically take care of your responsibilities."

"When you think about someone... being masculine or manly, it's not their height. It's not their size. It's the way you carry yourself... a hard worker... a good provider... a good leader... give advice."

"It is our responsibility to impart wisdom on the younger generation."

Man of character and faith/spiritual

"If you look at the physical specimen, somebody who goes out and works out all the time, that could deteriorate over the years... so when you lose that, what do you have left? The character of the individual."

"This man is very manly. He stands for, you know, a lot of good things in life, honesty... he's a good person."

"What makes the person manly is not so much the physical, but the spiritual. How he relates to his family... his children... his wife ... the spiritual background he has."

Physical nature; masculine physique; macho; sexual prowess; athletic; active

"... a good specimen... well built... anatomically and muscle-wise... not fat at all."

"Lean built, what I mean by that is no excessive fatness on a person... body looks good."

"Usually I think about a man, I used to think about the old rough and hard working, blue collar worker... he works out and... he's more active."

"I'm manly because the way, you know, I take care of myself. Well, mostly my sex life, and that's what makes it."

"When I think of what makes a someone manly is just that whole male persona of masculinity, athletic... physical fitness and all those kinds of things."

Changes in manhood with age

Acceptance; letting go; futility

"And as the older you get, you know that you have to compensate and really come to the realization that you can't do what you did when you were a young person or a young man."

"It changes with age because at a certain age you know you're not going to be around that long anyway. So you get to the point where it doesn't really matter."

Table 2 (Continued)
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Smarter/wiser; become	'' as I've gotten older, I've try to eat smarter I feel like I'm in the	
more health conscious	best physical shape that I've ever been in I know that I can't stop getting older, but I don't have to get aging just be smarter about it.''	
	"I think the older a man gets, he's a little wiser. And he'll do things, more things in moderation as far as trying to do better for his health."	
Influence of AA culture on n	nanhood	
Lack of difference among cultures	"I don't know if there's much difference from the different cultures that I've seen the macho man tends to do the same kind of macho man kinds of things."	
	''I don't think there is a difference. A man is a man. There's certain things men do, it don't really matter what race or nationality.''	
Perseverance; stress	"A lot of times you were denied opportunities so sometimes that takes away your manhood. It becomes a matter of struggle or surviva and, you know, as a man, you do what you have to do it's not fair you just discover your manhood in a different manner."	
	"I may not have all of the advantages of some people of other racial origins, but what you do is you don't quit, you don't give up. You have to be twice as good and do what it takes to be that good"	
Influence of manhood on he	alth	
Negative influence	"Well, from an African American perspective, men are the last people to go to the doctor. A lot of that is because they are conditioned to be hard and we don't feel pain and we're not supposed to show pain because that's a sign of weakness or being soft."	
	"Part of it is that medical macho thing. I don't go to the doctor. What I need to go to the doctor for?"	
Positive influence	"If you feel good, if you're in good health, you can present yourself better. You can communicate better. You're more active."	
	"Like I said, you want to be around. You want to live a long, long time. So, in order to do that, you have to see the doctor more often, eat the right foods, just be more in tune with your body."	
	"If you have kids, you want to live as long as possible. In order to do that, you have to maintain a certain type of healthy lifestyle. It wouldn't be fair to my sons if I lived a lifestyle that required them to care for me later on."	

or suffering, as expressing pain or suffering would be viewed as a weakness. Some stated that men have an attitude of being able to mend themselves, not wanting to admit defeat to an ailment, and feeling ashamed to talk about health concerns. An indication of this prevalent view was captured by one man who firmly stated, "If you have cancer, you're less of a man."

The concepts of "tough," "macho," and "reckless" were also related to poor health behaviors such as drinking, smoking, poor diet, and being sedentary. In one sense, poor health behaviors were "necessary to prove manhood" as men are encouraged to "push beyond their limits." However, men also commented that poor health behaviors were ignored because men were "stubborn to change." Some of the men also reported that positive health behaviors (e.g., walking, aerobics, eating healthy) are viewed as feminine and more appropriate for women.

Aligned with these views were remarks about avoiding doctor visits and other health appointments such as, "I haven't been to the doctor in years." Some men discussed the need "to be in control" and the concern that they would lose control if they went to a doctor. One striking comment was that going to the doctor was associated with "girl stuff." This shared perspective was exemplified by one participant who claimed, "That's just the whole mental capacity. The conditioning of snakes and snails and puppy dog tails versus sugar, spice and everything nice."

On the positive side, participants frequently stated that perceptions of manhood can lead to a healthier lifestyle. The concept of responsibility was prevalent in that many men described remaining physically active, eating better, and getting adequate rest so that they could take care of themselves and live longer and thereby better provide for their families. Reflecting this collective viewpoint were comments such as, "Health is number one to being a successful man," and "A healthy lifestyle is the outcome of being a good man." Some men revealed that manhood favorably influences health through participation in sports and other physical activities.

Discussion

Men's and women's shared perceptions and understandings about what it means to be a man contribute to definitions of masculinity, which are further defined by ethnicity and culture [1,31]. Cultural perceptions of "how a man should be" that are endorsed by family, colleagues, friends, peer groups, and others can produce social norms that either positively or negatively influence health-related behaviors. In this study, we explored the relationbetween masculinity and health disparities of a particularly vulnerable population - AA men in midlife and older adulthood [32].

Participants primarily expressed traditional, or stereotypical, views of masculinity in describing the "typical" man. The most frequently cited attributes of someone considered "manly" included a leader of a family/ household, a provider, someone having a strong work ethic, and a masculine physique. The men commonly used terms such as "responsible," "principled," "man of God," "macho," and "strong" to describe the typical man. Some views of being a man as expressed by these AA men, >45 years of age, are comparable to those previously found to be associated with college-age males of various ethnicities [33]. These include the concepts of macho, masculine physique, sexual prowess, and strong. However, other attributes, such as those of being a provider, a man of character and faith, and responsible seem to be associated with a level of maturity that comes with age and experience [34]. The mid-range scores on the masculine identity brief questionnaire also reflect a moderate view of masculinity in this group of midlife and older AA men, when compared with younger men.

Other investigators have noted that whereas age-related changes in the body and men's self-perception of masculinity create an emotional challenge in some men, other men find self-respect and opportunity [12,35,36]. Reflections by the midlife and older AA men in the current study, 76% of whom reported the existence of at least chronic disease or condition, confirm these contrasting views. Themes of acceptance and relaxation, as well as futility, were associated with age-related declines in physical function. Overcoming these age-related perceptions and physical alterations that can both threaten a man's sense of masculinity and undermine the adoption of health-promoting behaviors represents a distinct challenge to health care providers and public health practitioners. However, many of the men also reported favorable changes occurring with aging, such as wisdom, being more health conscious, and practicing healthy habits to combat functional decay. A useful strategy with this population may be to identify midlife and older AA men of varying levels of physical function and/or health who have a positive outlook on aging to serve as role models for other men to pique their interest in maintaining good health. These findings also attest to the need to more deeply explore masculinity across AA men of varying ages and circumstances to understand similarities and differences in their perceptions and how these can be utilized to develop

gender-tailored health promotion programs

Many of the participants reported that, among midlife and older AA men, masculinity can have a negative influence on health-related behavior. Avoidance of medical appointments was commonly identified, and other positive health behaviors (e.g., walking for exercise, healthy eating) were often viewed as less than manly and not to be adopted. Several men reported that going to a doctor or other health care provider would be perceived as losing control of one's life and/or health. Although one study recently reported that delays in doctor visits by AA men are due more to medical mistrust rooted in expectations of racially-based treatment than masculine identity [20], the present study suggests that factors associated with masculinity, such as admitting a lack of self-reliance when seeking health care assistance, do contribute to these delays. It appears vital for medical and other health care professionals especially to be aware of the need to integrate procedures within their practice that enable midlife and older AA men to feel as if they are co-equal in decisions about the care and treatment they receive and in control of the process.

Some men commented that working hard and taking responsibility as family provider to fulfill expected social and cultural roles wore them down, thereby causing stress and health problems. The difficulty of living up to highly idealized, and often internally contradictory, norms and stereotypes of traditional male gender roles has been described as gender role strain or gender role conflict [32,37,38]. Others have hypothesized that as AA men strive to resolve differences between their desire and their capacity to achieve prominent male roles (i.e., experience gender role strain/conflict), these men may be less likely to engage in health-promoting behaviors [12,39]. Interestingly, many men in this study also reported how traditional views of masculinity could favorably impact their health. Here again, the notion of responsibility was identified as critical in motivating men to be physically active, eat healthier, and get adequate rest so that they could take care of themselves and their families.

The majority of men in this study did not believe that what it means to be a man differs among men, based on their race or culture. However, for those who did perceive some influence of race or culture on masculine identity, the concepts of perseverance and stress were assigned to being AA. Despite the potential negative consequences of racismrelated stress, some men acknowledged that racism leads to an attitude of never giving up. Perseverance was perceived as a positive attribute that could lead to changes in behavior to promote better health. Whether this perspective is unique to AA men or also present in men of other races or cultures is unknown and requires additional investigation.

There are several implications for practice that can be gleaned from this study. Clearly, researchers and health promotion professionals should consider how to integrate the component of responsibility into gendertailored interventions to inspire midlife and older AA men to begin and maintain positive health behaviors, and how embracing such behaviors will assist them in successfully fulfilling their role as family provider. It has been proposed that educational programs may need to be implemented among AA men and women to transform socially constructed aspects of masculinity that negatively influence health behaviors [32]. The current results support this strategy in an effort to raise awareness within the AA community that being a man and being healthy can co-exist and, as indicated earlier, favorable health behaviors can help maintain masculinity despite aging and the presence of a chronic disease or condition.

An interesting finding was that AA men who self-reported low levels of PA were more likely to describe a typical man with terms such as sexual prowess, strong, well-dressed, athletic, masculine physique, confident, and active. If health promoters are going to be successful in encouraging inactive AA men to increase their PA level, they should realize that this "ideal" may exist among their clients. It may be necessary to gradually shift inactive AA men's views of what it means to be a man and educate them that increases in PA level may not result in attainment of attributes such as athletic, masculine physique, and sexual prowess. Focusing on short-term behavioral goals (e.g., steps or minutes of PA per week), as well as other benefits of being physically active (e.g., better sleep, reduced risk or improved management of chronic disease) will aid midlife and older

AA men in achieving meaningful outcomes that reinforce positive behavior change.

If health promoters can determine how to incorporate the attribute of perseverance in to behavior change interventions for midlife and AA men, as well as demonstrate to them how behavioral changes will help manage stress, recruitment and retention efforts will be much more successful. A similar conclusion was provided in a recent study of younger AA men as the authors proposed the leveraging of traditional masculine self-reliance in interventions to empower AA men to "seize control" of their health [23]. Another formative study reported that AA men aged 33-77 years perceived work and family as more important than other aspects of their lives, and unfortunately, strategies for coping with stress did not include healthy behaviors such as physical activity [39]. Additional qualitative and intervention research is needed to determine the most acceptable methods of integrating masculine responsibility and self-reliance in to health-related programs for AA men.

Limitations to the present study should be noted. First, by its nature, the sample size was small, self-selected, and from one geographic location. The majority of participants were married, well-educated, and of middle to upper income. However, it was not intended for these qualitative findings to be generalized to all AA men in the state, AA men in other regions of the South, or other racial or cultural populations. Physical activity level determined by responses to a self-report survey may have led to some misclassification due to recall bias or social desirability [40]. However, this instrument has proven reliability and validity in AA adults [41].

Some participants >80 years of age had difficulty providing meaningful responses to certain questions, and future studies may consider incorporating other procedures (e.g., focus groups) with larger numbers of AA men in this age group to gain further understanding of their views of masculinity. Despite these limitations, this study provides excellent insights into views of masculinity in AA men aged >45 years, and how such perspectives may be useful for constructing gender-tailored health promotion interventions in this vulnerable population.

In conclusion, the midlife and older AA men in this study expressed views of masculinity that fit the traditional perception of manhood. However, for many of the men, aging was also associated with a "softer" perspective of masculinity. The attributes revealed, such as family provider, responsibility, strong, self-reliance, and perseverance, were viewed as having potential for both negative and positive impacts on health and health-improving behaviors. We echo the need for health providers and promoters to acknowledge midlife and older AA men's priorities and work closely with them to determine the most effective means of delivering health promotion programs [39]. As such, it will be essential to integrate the prevalent attributes of masculine identity mentioned above into health promotion interventions such that they facilitate behavior change while not competing with gender role norms among this at risk group of men.

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References

- [1] Courtenay WH. Dying to be Men: Psychosocial, Environmental and Biobehavioral Directions in Promoting the Health of Men and Boys. New York, NY: Routledge; 2011.
- [2] International Longevity Center USA. Promoting Men's Health: Addressing Barriers to
- Healthy Lifestyle and Preventive Health Care. New York, NY: International Longevity Center - USA; 2004.
- [3] Courtenay W. Key determinants of the health and well-being of men and boys. Int J Mens Health 2003;2:1-30.
- [4] Lee C, Owens R. Issues for a psychology of men's health. J Health Psychol 2002;7:209-
- [5] Courtenay W, McCreary D, Merighi J. Gender and ethnic differences in health beliefs and behaviors. J Health Psychol 2002;7:219–31.

- [6] Gijsbers van Wijik C, Huisman H, Kolk A. Gender differences in physical symptoms and illness behavior. A health diary study. Soc Sci Med 1999:49:1061-74.
- [7] Stovernick M, Lagro-Janssen A, Weel C. Sex differences in health problems, diagnostic testing, and referral in primary care. J Fam Pract 1996;43:567-76.
- [8] Neighbors H, Howard C. Sex differences in professional help seeking among adult Black Americans. Am J Community Psychol 1987; 15:403-15.
- [9] Hunter A, Davis J. Constructing gender: an exploration of Afro-American men's conceptualization of manhood. Gend Soc 1992;6: 464-79
- [10] Connell R. Masculinities. Berkeley, CA: University of California Press; 1995.
- [11] Courtenay WH. Constructions of masculinity and their influence on men's well-being: a theory of gender and health. Soc Sci Med 2000;50(10):1385-401.
- [12] Evans J, Frank B, Oliffe J, Gregory D. Health, illness, men and masculinities (HIMM): a theoretical framework for understanding men and their health. J Men's Health 2011;8(1):
- [13] Courtenay WH. Engendering health: a social constructionist examination of men's health beliefs and behaviors. Psychol Men Masc 2000;1(1):4-15.
- [14] Harris I, Torres J, Allender D. The responses of African American men to dominant norms of masculinity within the United States. Sex Roles 1994;31:703-19.
- [15] Kung H, Hoyert D, Xu J, Murphy S. Deaths: preliminary data for 2005. Natl Vital Stat Rep 2008;56:1-120.
- [16] Agrawal S, Bhupinderjit A, Bhutani MS, Boardman L, Nguyen C, Romero Y, et al. Colorectal cancer in African Americans. Am J Gastroenterol 2005;100(3):515-23.
- [17] American Cancer Society. Cancer Facts and Figures for African Americans 2009-2010. Atlanta, GA; 2009.
- [18] Thom T, Haase N, Rosamond W, Howard VJ, Rumsfeld J, Manolio T, et al. Heart disease and stroke statistics - 2006 update: a report from the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Circulation 2006;113(6):e85-e151.
- [19] Hummer R, Benjamins M, Rogers R. Racial and ethnic disparities in health and mortality

- among the U.S. elderly population. In: Anderson N, Bulatao R, Cohen B, editors. Critical Perspectives on Racial and Ethnic Differences in Health in Late Life, Washington, DC: National Research Council, The National Academy of Press; 2004.
- [20] Hammond WP, Matthews D, Corbie-Smith G. Psychosocial factors associated with routine health examination scheduling and receipt among African American men. J Natl Med Assoc 2010;102(4):276-89.
- [21] Mahalik JR, Burns SM, Syzdek M. Masculinity and perceived normative health behaviors as predictors of men's health behaviors. Soc Sci Med 2007;64(11):2201-9.
- [22] Musa D, Schulz R, Harris R, Silverman M, Thomas SB. Trust in the health care system and the use of preventive health services by older black and white adults. Am J Public Health 2009;99(7):1293-9.
- [23] Hammond WP, Matthews D, Mohottige D, Agyemang A, Corbie-Smith G. Masculinity, medical mistrust, and preventive health services delays among community-dwelling African-American men. J Gen Intern Med 2010;25(12):1300-8.
- [24] Centers for Disease Control, Quick Stats: Percentage of older adults who engaged in regular leisure-time physical activity, by age group and sex - United States, 2000-2003. MMWR Morb Mortal Wkly Rep 2006;55(28):779.
- [25] Pate R, Pratt M, Blair S, Haskell WL, Macera CA, Bouchard C, et al. Physical activity and public health. A recommendation from the Centers for Disease Control and Prevention and the American College of Sports Medicine. JAMA 1995;273:402-7.
- [26] Peck LE, Sharpe PA, Burroughs EL, Granner ML. Recruitment strategies and costs for a community-based physical activity program. Health Promot Pract 2008;9(2):191-8.
- [27] QSR. QSR NVivo 7 Version [computer program]. Melbourne, AU: Qualitative Solutions and Research Pty Ltd; 2006.
- [28] Laditka SB, Corwin SJ, Laditka JN, Liu R, Friedman DB, Mathews AE, et al. Methods and management of the healthy brain study: a large multisite qualitative research project. Gerontologist 2009;49(Suppl 1):S18-22.
- [29] Miles M, Huberman A. An Expanded Sourcebook. Qualitative Data Analysis. Thousand Oaks, CA: Sage Publications; 1994.

- [30] Glaser B, Strauss A. The Discovery of Grounded Theory: Strategies for Qualitative Research. New York, NY: Aldine de Gruyter;
- [31] Liburd LC, Namageyo-Funa A, Jack Jr L. Understanding "masculinity" and the challenges of managing type-2 diabetes among African-American men. J Natl Med Assoc 2007;99(5):550-2: 554-8.
- [32] Jack Jr L, Toston T, Jack NH, Sims M. A gender-centered ecological framework targeting black men living with diabetes: integrating a "masculinity" perspective in diabetes management and education research. Am J Mens Health 2010;4(1): 7-15.
- [33] Courtenay WH. College men's health: an overview and a call to action. J Am Coll Health 1998;46(6):279-90.
- [34] Hammond W, Mattis J. Being a man about it: manhood meaning among African American men. Psychol Men Masc 2005;6(2): 114-26
- [35] Arber S, Davidson K, Ginn J. Changing Roles and Relationships. Philadelphia: Open University Press; 2003.
- [36] Please B. Men and Gender Relations. Melbourne, Australia: Tertiary Press; 2002.
- [37] Bowman P. Role strain and adaptation issues in the strength-based model: diversity, multilevel, and life-span considerations. Couns Psychol 2006;34(1):118-33.
- [38] Thompson E, Pleck J. Masculinity ideologies: a review of research instrumentation on men and masculinities. In: Levant R, Pollack W, editors. A New Psychology of Men. New York, NY: Basic Books; 2005.
- [39] Griffith D, Gunter K, Allen J. Male gender role strain as a barrier to African American men's physical activity. Health Educ Behav 2011;38(5):482-91.
- [40] Adams SA, Matthews CE, Ebbeling CB, Moore CG, Cunningham JE, Fulton J, et al. The effect of social desirability and social approval on self-reports of physical activity. Am J Epidemiol 2005;161(4):389-98.
- [41] Yore MM, Ham SA, Ainsworth BE, Kruger J, Reis JP, Kohl 3rd HW, et al. Reliability and validity of the instrument used in BRFSS to assess physical activity. Med Sci Sports Exerc 2007;39(8):1267-74.