

Development and Testing of a Conceptual Model Regarding Men's Access to Health Care

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Abstract

Epidemiologic data suggest men often experience excessive morbidity and early mortality, possibly compromising family and community health over the lifespan. Moreover, the negative financial/economic consequences affected by poor male health outcomes also has been of great concern in the United States and abroad. Early and consistent access to preventative health care may improve health outcomes; however, men are far less likely to access these services. The purpose of this study was to understand what factors preclude men from accessing health care. We surveyed 485 participants using a 58-item online survey built from a conceptual model previously developed by the researchers using hegemonic masculinity theory, the theory of normative contentment, and the health belief model. For men, three items significantly ($ps < .05$) predicted whether they had seen a health care provider in the past year: "I/Men do not access healthcare because I do not think there is anything wrong with me," "My health is only about me," and "I/Men do not access healthcare because most men in my family do not access healthcare." Other correlations of practical significance also were noted. Results suggest gender norms and masculine ideals may play a primary role in how men access preventative health care. Future programming targeting males should consider barriers and plan programs that are gender-sensitive in addition to being gender-specific. Clinical implications are discussed.

Keywords

access, health care, *Healthy People 2020*, males, prevention

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Introduction

Men live with significant morbidity and experience earlier mortality than women in the United States (National Center for Health Statistics [NCHS], 2010; Singh, Azuine, Siahpush, & Kogan, 2013; Sorenson, 2011) and abroad (White et al., 2011). Theories abound as to why males experience poorer health outcomes than their female counterparts, including biology (i.e., testosterone, brain biology; Haddad et al., 2007; Zhang et al., 2011) and social determinants of health (Macdonald, 2006; Williams, 2003). What may be more salient, however, is exploring what common attitudes underpin men's perceptions concerning health and health care. Specifically, working from a strengths- and

prevention-based perspective focusing on education and ease of access to health care, may provide more salient results improving men's health (Leone & Rovito, 2013). The following sections will elaborate on some of the root causes of men's health concerns.

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Men's Health Disparities

Differences in the incidence, prevalence, mortality, burden of disease, and other adverse health consequences in specific populations characterize a health disparity (Keppel, Garcia, Hallquist, Ryskulova, & Agress, 2008). Specifically, a difference in the needs of groups also highlights disparate issues among groups. In the United States, men die sooner (roughly by 5 years) than women from 9 out of the top 10 leading causes of death (Table 1; NCHS, 2010). In addition, U.S. men also tend to have higher risk occupations, experience poorer overall health, and have less positive quality of life indicators than women (Porche, 2010; Wilkins, 2010). Compared with women, therefore, men appear to have a relative health "disadvantage" when stratified by race, ethnicity, and socioeconomic status (SES), further highlighting a health disparity that has received little attention in recent years (see James, Salganicoff, Ranji, Goodwin, & Duckett, 2012).

Reducing health disparities has been an overarching goal of *Healthy People*. Specifically, *Healthy People 2020* purports to, "Achieve health equity, eliminate disparities, and improve the health of all groups" (Keppel et al., 2008, p. 2; U.S. Department of Health & Human Services, n.d.). What is important to recognize is that only through critical analysis of the epidemiology and sociocultural factors (i.e., *who* is accessing *what* in terms of health care) can we attempt to understand disparate health outcomes and resultant consequences stemming from this disparity, inclusive of economic insecurity and reduced quality of life. To properly address these concerns, a lifespan perspective may provide a framework from which public health creates prevention programs targeting boys and men (Leone & Rovito, 2013). The latter point should be viewed with primacy given that most health issues (see Table 1) take a lifetime to develop and manifest.

Economic Burden of Men's Poor Health

From an ecological perspective men's health outcomes are not simply a matter of individual-level problems, but rather a systemic social issue that warrants direct attention (Bonhomme, 2007). Poorer men's health outcomes in the United States affect the economy in a multitude of ways, including significant implications for lost time from work, diminished work productivity, greater dependence on one's spouse and/or the welfare system (e.g., long- and short-term disability), lost contributions to the tax system, and less presence in the household, possibly negatively affecting families (Brott et al., 2011; Thorpe, Richard, Bowie, LaVeist, & Gaskin, 2013).

Brott et al.'s (2011) cost analysis of U.S. expenditures on health care and lost productivity based on men's health

Table 1. Leading Causes of Mortality in U.S. Males With Male to Female Disparity Rates.

Cause of mortality ^a	Relative frequency (%)	Male to female ratio ^b
Heart disease	25.7	1.8
Cancer/neoplasms	24.3	1.4
Unintentional injuries	6.6	2.4
Chronic lower respiratory diseases	5.1	1.4
Stroke	4.5	1.1
Diabetes	2.9	1.2
Suicide	2.3	4.3
Influenza and pneumonia	2.0	1.5
Kidney disease	1.9	1.5
Alzheimer's disease	1.8	0.95 ^c
Other causes	22.9	1.6 ^d

^aAll males, all ages. ^bAge-adjusted death rate per 100,000 (USA).

^cLikely due to females having a longer lifespan. ^dAll causes of death, male to female.

Source: Centers for Disease Control and Prevention (2007), NCHS (2010).

outcomes (roughly \$136-\$142 billion dollars annually) highlighted the financial effect of a male population that lives sicker and dies younger. Additionally, \$156 billion annually are spent on direct medical costs and lost productivity (i.e., missed work or unemployment due to disability) while another \$181 billion stem from decreased health status and quality of life measures.

Thorpe, Richard, et al. (2013) used data from the 2006-2009 Medical Expenditure Panel Survey and National Vital Statistics Reports and found that by eliminating health disparities in racial/ethnic minority men, roughly \$24.2 billion excess direct costs of the \$447.6 billion dollars could be saved in the long run. More pointedly, the authors note, "Failure to do so is both socially and morally wrong and carries huge economic consequences" (p. 195). Therefore, it is in the U.S. economy's best interest, in addition to being the morally correct position, to invest in understanding how to augment men's health through access, participation, and prevention, with access being the linchpin to action.

Men Accessing Health Care

Research suggests that men are far less likely to access preventative or palliative health care services compared with their female counterparts (Galdas, Cheater, & Marshall, 2005; Jeffries & Grogan, 2012). Studies have noted a consistent trend in men being 100% less likely than women to access preventative health care, controlling for age, nationality, and ethnic/racial backgrounds (Addis & Mahalik, 2003; Bertakis, Azari,

Helms, Callahan, & Robbins, 2000; Bonhomme, 2007). Even when men *do* access health care, they ask fewer questions and report a less engaging experience (Pinkhasov et al., 2010), perhaps accounting for reluctance to access/utilize health care. Addis and Mahalik (2003) also discussed that health care outreach efforts may not encourage men in a gender-sensitive manner, thus creating an unspoken, but important, barrier.

The Kaiser Family Foundation (KFF) highlighted significant disparities in racial and ethnic groups of men pertaining to accessing and receiving health care (James et al., 2012). Noted in the KFF report, American Indian and Alaska Native men had the worst reported health status and Hispanic men were most negatively affected by the social determinants of health (e.g., poverty, unemployment, low SES) as well as access and utilization of health care. Fortuna, Robbins, and Halterman (2009), found that young adults, particularly Black and Hispanic males, only see a doctor less than once every 9 years for preventative care. Table 1 highlights some of the main concerns that might relate to men not accessing health care in a timely or consistent manner.

Some research runs contrary to the perception that minority men participate less in screenings. Thorpe, Bowie et al. (2013) found that African American men had *higher* rates of participation in preventative screenings than White men, thus demonstrating the value of keeping the social context in mind when working with diverse groups of men in public health campaigns, programs, and screenings (e.g., hypertension, diabetes). Keeping the social and cultural context in mind also was advocated for by Gough (2006); the author reminds us that men are not a homogenous group where sweeping generalizations can be made. Policies and health programming need to keep in mind how we speak to men, specifically keeping the conversation inclusive of all men and not pandering to a "type" of man (i.e., hegemonic masculinity).

Social barriers for men also are important considerations for accessing health care. For example, Wilkins (2010) notes, "We can easily see then from both the gender-comparative data and the data that compares groups of men, that non-biological factors are extremely important determinants of male mortality and morbidity" (p. 201). Thorpe, Bowie et al. (2013) discuss the social justice principles associated with improving male health. Specifically, providing mechanisms via policy, government action, and quality programming to improve overall health, health outcomes, and other leading health indicators are needed. Primary, secondary, and tertiary prevention as well as fair and equitable access, treatment, follow-up, and promotion of health-related principles also should underpin and guide initiatives. Early death rates and high morbidity are certainly preventable; Wilkins (2010) states, ". . . they [deaths] are happening

for no other reason than that we are not very good at addressing male-specific needs" (p. 201).

Understanding the theories that underpin what precludes men from seeking health care services are important to appreciate so as to develop gender-appropriate, effective public health programs as discussed by Thorpe, Richard et al. (2013). Some seminal pieces have been instrumental in shepherding current efforts in trying to understand male health care navigation through formal structural and behavioral theories. For example, Addis and Mahalik (2003) explored how men evaluate the context of seeking help based on masculine theory, equating asking for help and following up with health care to the common stereotype of men refusing to ask for directions when lost. Jeffries and Grogan (2012) found similar findings, but in younger men. Our attempt in understanding access and utilization attitudes and behaviors of health care in men used relevant theories in the study of men and masculinity, social norming, and behavioral health, which will be elaborated on in the next section.

Theoretical Basis: Why Men Do Not Regularly Access Health Care

It is important to consider what motivates behavior to plan more effective and sustainable public health programming for men. Understanding what may influence men to access health care can be partially explained by relevant theories in the psychology of men and masculinity studies. In this research, three primary theories affecting health choices and health behaviors in men were applied. Two of the three theories (hegemonic masculinity and theory of normative contentment [TNC]) relate more to individual and social motivators affecting health behaviors; the third theory (health belief model [HBM]), offers a more practical approach from which to base future men's health programming by accounting for perceived barriers.

Hegemonic masculinity theory proposes how gender roles are structured to promote male dominance over women (Connell, 2005b). However, when viewed from a health perspective, endorsement of hegemonic masculinity by individuals or society in general may help explain why men avoid seeking help and health care (Gerschick & Miller, 1994). For example, weakness, femininity, stigma, and many other "challenges" to one's masculine ideals often are at odds with health care and health-seeking behaviors in men. If culture promotes a "tough it out" ideology, a majority likely will live sicker and experience less health-related quality of life (Porche, 2010).

The TNC (Leone & Rovito, 2013) also proposes that society and culture in general, reinforce hegemonic masculinity by assuming poorer health behaviors and outcomes are "normal" in men. Questioning and understanding how and why society has come to view males

as living fewer and poorer quality years of life underpins the clinical/practical utility of the TNC. Incorporating the TNC in health education and health promotion programming logic models may prove a valuable addition in improving disparate male health outcomes.

The HBM (Hochbaum, Rosenstock, & Kegels, 1952) was originally developed to help explain and predict intent to adopt health behaviors and includes several theoretical constructs such as: perceived severity, perceived susceptibility, perceived benefits, perceived barriers, modifying variables, cues to action, and self-efficacy. The HBM is a very applicable and flexible model to use in the study of men's health behaviors, most notably accessing health care. As Addis and Mahalik (2003) note in their research on masculinity and health behaviors, there are several normative questions (i.e., "Will others view me as weak?") men consider that coincide with constructs of the HBM. Therefore, using the HBM to help explain and predict men's intent to access and engage in health care is a salient approach.

Purpose

The purpose of this research was to identify the strongest predictor variables that preclude men from accessing health care using a conceptual theoretical frameworks. With an apparent disconnect between effective, evidence-based men's health programming and health care (Levant, Wimer, & Williams, 2011), in addition to men's poorer health outcomes (NCHS, 2010; Singh et al., 2013; Sorenson, 2011; White et al., 2011), understanding what precludes men from accessing health care is warranted in the literature. Two general research questions were proposed: (1) What are the statistically strongest precluding factors to men accessing health care? and (2) What are common enablers for men to access health care based on a conceptual model? We also examined whether our variables would align with Addis and Mahalik's (2003) model concerning (1) normativity, (2) centrality, (3) reciprocity, (4) reactivity, and (5) control in terms of avoiding health care. We also analyzed our model from a hegemonic masculinity theory perspective, proposing the strongest predictors of men not accessing health care will be unmasculine (macho/machismo), stigma, reactivity, and weakness/vulnerability. Using the TNC, we postulated that the strongest predictors to men not accessing health care would be fatalism, denial, low awareness of risks, and low knowledge. Last, we examined our model considering the HBM (i.e., perceived barriers), for the strongest predictors to men not accessing health care. We proposed that fear, embarrassment, discomfort/unfamiliarity, coping mechanisms (fix it mentality), lack of resources (money, time), convenience, low awareness, and stress would align with the HBM's perceived barriers

in terms of accessing health care. Taken together the following hypothesis was tested:

Hypothesis 1: The strongest predictors of precluding factors to men accessing health care will correlate significantly ($p \leq .05$) to time, convenience, resources, fear, embarrassment, discomfort, and lack of awareness of health care options.

Method

Study Design

We used a cross-sectional correlational study design to assess the strength of the conceptual model factors as they relate to precluding factors to men accessing health care.

Participants

A convenience sample was recruited using social media and networking sites (e.g., LinkedIn™, Facebook™, health education listservs), in addition to posting in public forums. The survey was offered in an online format. Males and females aged 18 years and older were invited to participate; men were asked to reflect on their own behaviors, whereas women were asked their perspective about what they believed about male behaviors. A total of 485 participants accessed the survey link. Nine cases were deleted as no data were entered, therefore leaving 476 participants to serve as the sampling pool. A zero was entered into individual items where no response was provided and labeled as a missing case. Missing cases were excluded from the analysis by variable leading to a final sample of $N = 474$.

Slightly more than half (57.1%, $n = 271$) of participants identified as male, 199 (41.8%) identified as female, 4 (0.7%) identified as "other," and 2 (0.4%) did not respond to the question. Mean age of participants was 33.48 years ($SD = 13.16$); 35.36 ($SD = 13.32$) for men and 30.84 ($SD = 12.44$) for women. Table 2 provides detailed demographics of the participants separated by gender. Most participants (85.9%, $n = 407$) classified their current health status as *excellent/good*. Of the remaining participants, 12.7% ($n = 60$) identified their health as *fair*, 1.1% ($n = 5$) identified their health as *poor*, and 0.4% ($n = 2$) identified their health as *terrible/failing*.

Measures

A validated questionnaire examining attitudes and practices as to what precludes men from seeking access to health care was developed from an exhaustive review of the literature, content analysis, key informant interviews,

Table 2. Demographic Statistics of Participants.

Variable	Mean/ frequency	SD/%
Ethnicity		
White/Caucasian (non-Hispanic)	375	78.8
Black/African American (non-Hispanic)	32	6.7
Hispanic/Latino	28	5.9
Asian/Pacific Islander	18	3.8
American Indian/Alaska Native	1	0.2
Multiracial	19	4.0
Not reported	3	0.6
Employment		
Full time	245	51.9
Part time	132	27.7
Unemployed	57	12.0
Retired	11	2.3
Other	27	5.7
Education level		
Less than high school	1	0.2
High school graduate	36	7.6
Some college	101	21.2
Associate's degree	72	15.1
College graduate	149	31.3
Master's degree	74	15.5
Postgraduate education	41	8.6
English first language		
Yes	441	92.6
No	34	7.1

and qualitative individual interviews. Additionally, a demographic survey also was included to capture participant data and experiences.

M.A.L.E. H.E.L.P. Questionnaire (MHQ). The MHQ is a 58-item attitudinal questionnaire where participants respond to a 5-point Likert-type scale ranging from *strongly disagree* (e.g., "1") to *strongly agree* (e.g., "5") which produce mean scores. In addition to attitudinal questions, four items assess behaviors (i.e., frequencies), and one question assesses knowledge. The scale was structured from expert interviews, review of literature, and qualitative findings assessing why men do not access health care. Each item is assessed as an individual predictor variable that corresponds to theoretical work in the area of men's views toward health care (see Addis & Mahalik, 2003; Leone & Rovito, 2013). The initial questionnaire underwent expert review to help establish content and face validity. A pilot test ($N = 20$) was performed and demonstrated good internal consistency ($\alpha = .88$). In the present study, good internal consistency was noted, $\alpha = .90$.

Demographic Questionnaire. In addition to attitude and behavioral questions, eight demographic questions

were used to track participant characteristics (e.g., gender, age, SES, etc.).

Procedures

Following international review board approvals and initial pilot testing a convenience sample ($N = 485$) was recruited. Participants were sent a request to participate in a 10- to 15-minute survey, which included a brief overview of the study, informed consent, and the survey link. Accessing the link was used to assure participant consent; only participants older than 18 years were invited to take the survey and no compensation was provided. The survey was available for a period of 56 weeks (7/21/14-8/21/15).

Statistical Analysis

Descriptive statistics were run for participant demographics. For the purpose of this article, statistical analysis for men and women were conducted and are reported separately. Spearman's Rank Order Rho (r_s) correlations were calculated between all predictor variables in the questionnaire with two criterion items. The first criterion/outcome variable was as follows: "Have you seen a health provider in the past . . ." with response options including the following: (1) 1 to 3 months, (2) 4 to 6 months, (3) 7 to 9 months, and (4) 10 to 12 months, and (5) No, I have not seen a provider in the past 12 months. The second criterion/outcome variable was as follows: "My use of the healthcare system is (choose one):" with response options: (1) excessive, (2) more than average, (3) about average, (4) below average, (5) minimal, and (6) nonexistent. Items that significantly predicted the criterion variable were entered into Forced Entry Linear Multiple Regressions. In both regression analyses, age of the participant was controlled for. Our a priori critical value for analyses was set to $p < .05$. Intercorrelations and collinearity statistics were reviewed for related items to avoid high multicollinearity. After the completion of the regression analyses, significant predictors were reviewed and grouped appropriately to present a visual schematic of predictors that preclude men from accessing health care. Statistical analyses were performed using SPSS version 23.0 (Chicago, IL).

Results

Criterion/outcome variables were reviewed for normality and outliers. "My use of the health care system is: . . ." was normally distributed however; "Have you seen (been to) a healthcare provider in the past" was positively skewed, but not drastically. No extreme outliers were identified. Due to the ordinal level of measurement of the variables, nonparametric correlational analysis was used.

Table 3. Correlation and Regression Coefficients for Items, Which Predicted Use of the Health Care System.

Predictor	r_s	β_{males}	t_{males}	β_{females}	t_{females}
Men are more likely than women to access healthcare. ^a	.13**	.19	2.99**	.15	2.04*
If I/Men feel alright, then there is no need to access healthcare. ^b	.20**	.15	2.19*	.003	0.04
I/Men do not access healthcare because I feel my doctor/provider does not respect me. ^c	.10*	.15	2.45*	-.02	-.030
I/Men do not access healthcare because there is nothing wrong with me. ^b	.20**	.13	1.99*	.08	1.11
I/Men do not access healthcare because there is nothing wrong with me. ^b	.19**	.12	1.67	-.09	-1.19
I/Men do not access healthcare because it adds stress to my life. ^d	.16**	.11	1.78	-.06	-.088
I/Men do not access healthcare because it is hard to access (i.e., get appointments.) ^a	.10*	.07	1.11	.03	0.45
I/Men only access healthcare when I have to. ^b	.18**	.06	0.83	-.02	-.021
Even though I/Men have not been to a health care provider recently, I am in good health. ^b	.21**	.04	0.61	.18	2.39*
I/Men do not access healthcare because it is inconvenient. ^e	.16**	.04	0.55	.09	1.06
I/Men do not access healthcare because I can cope with my body and conditions. ^f	.15**	.02	0.25	.05	0.53
I/Men do not access healthcare because it is not a priority. ^g	.11*	.002	0.03	-.05	-.062
“Real” men do not go to the doctor frequently. ^a	.14**	-.03	-.040	.03	0.33
I am likely to go to a healthcare provider only when I am injured or sick. ^b	.10*	-.03	-.045	-.13	-1.61
I/Men often can fix their health issues versus going to a doctor. ^f	.09*	-.04	-.065	.08	1.05
I/Men do not access healthcare because it costs too much money. ^e	.10*	-.06	-.099	.19	2.55**
It is important to get screened for health issues/diseases. ^h	-.23**	-.06	-.096	-.30	-4.08**
I/Men do not access healthcare because I can take care of my health issues at home. ^f	.10*	-.13	-1.63	-.06	-.073
African American men are less likely to access healthcare than other races/ethnicities. ⁱ	-.12*	-.14	-1.96	-.13	-1.87
I/Men do not access healthcare unless the issue/condition is severe. ^b	.16**	-.14	-2.313	.10	1.07
I/Men am likely to go to a healthcare provider for prevention, like a check-up or routine physical. ^a	-.22**	-.15	-2.31*	-.18	-2.48

Note. Items are grouped in the conceptual model in Figure 1 in the following manner: ^aGender expectations. ^bNothing wrong/only when sick.

^cLack of respect. ^dStress. ^eCost/access/inconvenience. ^fMen can cope on their own. ^gLow priority. ^hImportant to access health care. ⁱRace.

* $p < .05$. ** $p < .01$.

Variables were first correlated with “Have you seen (been to) a health care provider in the past.” After controlling for the age of the men ($n = 268$), 27 variables significantly correlated with the outcome variable and were entered into a regression analyses. Significant correlational coefficients ranged from .13 to .36 and are presented in Table 3. When combined, the 27 items were significant predictors of the outcome variable, $F(28, 239) = 3.23, p < .001, R^2 = .27$. Three items were statistically significant predictors: “I/Men do not access healthcare because I do not think anything is wrong with me,” $\beta = .25, t(238) = 3.42, p < .01$, “My health is only about me,” $\beta = .13, t(238) = 2.13, p < .05$, and “I/Men do not access healthcare because most men in my family do not access health care,” $\beta = .16, t(238) = 2.22, p < .05$. For women ($n = 196$), only two items significantly, weakly correlated with the outcome variable as presented in Table 3. After controlling for age, together the variables did not significantly predict the outcome variable of “Have you seen (been to) a healthcare provider in the past,” $F(3, 192) = 2.59, p = .054, R^2 = .04$.

A number of items were significantly correlated with the second criterion variable (how participants characterize their use of the health care system) for both men and women. All items with significant correlations are presented in Table 3. Items that significantly correlated were entered into regression analyses, controlling for age. For men, the combination of items significantly predicted how they themselves characterize their use of the health care system, $F(23, 242) = 3.65, p < .001, R^2 = .26$. For women ($n = 198$), the linear combination of items also predicted use of the health care system, $F(11, 183) = 6.95, p < .001, R^2 = .30$. Correlation coefficients and standardized regression slopes for both men and women are presented in Table 3. When reviewing the findings, the hypothesis was partially supported. As hypothesized, resources and lack of awareness of health care options were significant predictors of use of the health care system. While time, convenience, embarrassment, and discomfort were significantly correlated with the second outcome variable, they were not significant predictors. Understanding the importance to

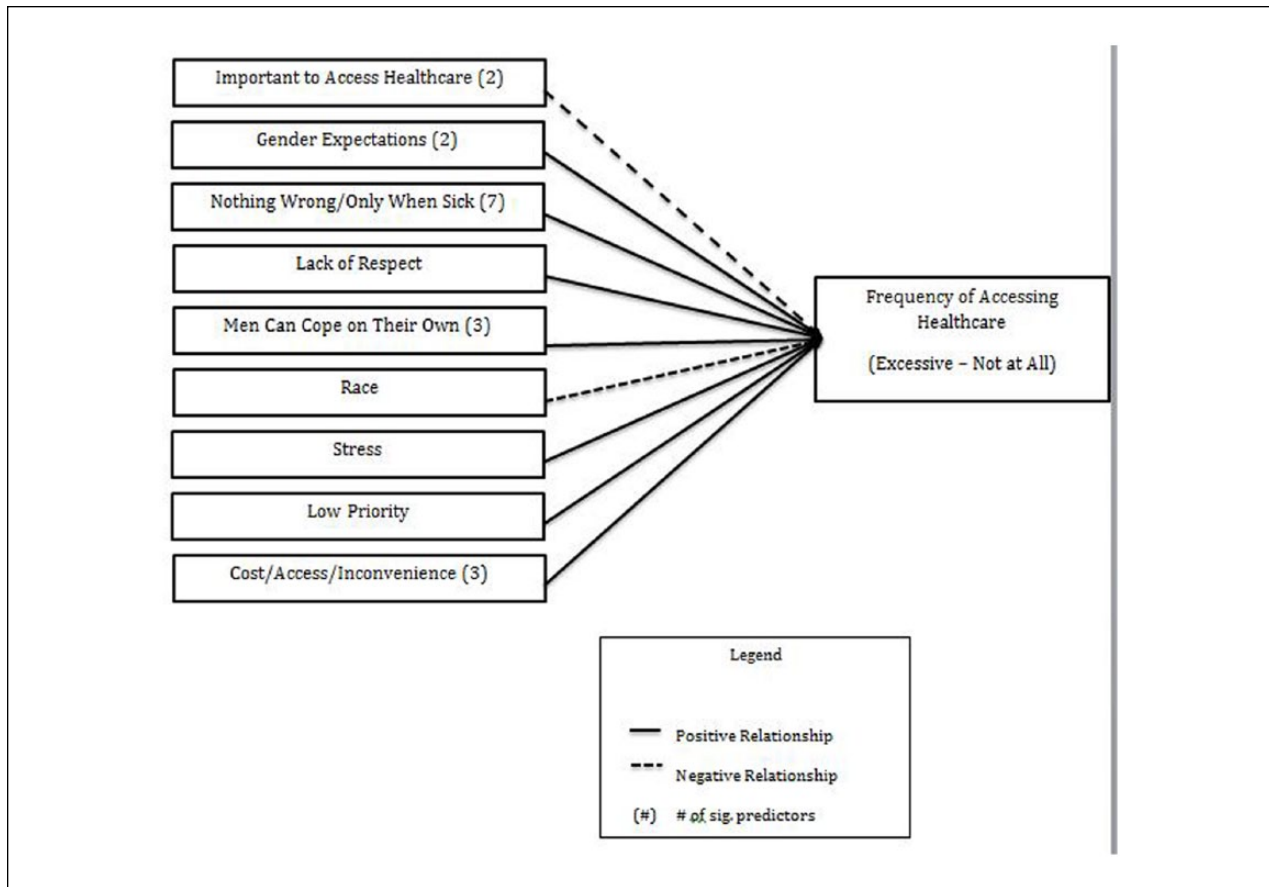


Figure 1. Conceptual schematic of factors, which preclude men from accessing health care.

accessing health care, denial, and gender emerged as significant predictors as well.

Based on the results of the regression analyses and the predictors that emerged, a conceptual model of factors that preclude men from accessing health care (see Figure 1) was developed in large part for its practical/clinical utility.

Discussion

The intent of this research study was to understand why men are less likely to access health care than their female counterparts. As Kurtzman (2014) suggests, "Prominent among the reasons cited by the researchers for the persistent gender disparity are male gender norms, which include reluctance among men in many areas of the world to seek medical care or follow medical advice." A theoretically sound and empirically tested conceptual model, therefore, is lacking in the literature concerning male health. Our research has attempted to address this gap.

Our hypothesis tested whether a conceptually sound, empirically tested model as to what precludes men from seeking health care could be developed. Results

preliminarily support a theoretically based conceptual model that helps explain individual and social factors that may influence a man's thought processes in seeking health care, thus supporting our first hypothesis (see Figure 1). We also were able to confirm the statistically strongest precluding factors to men accessing health care, thus being able to leverage this knowledge in future programming geared toward male health. It is vital to understand barriers to men seeking preventative and palliative health care due to the disproportionate health and economic burden of early morbidity and mortality in this population (Brott et al., 2011; NCHS, 2010; Singh et al., 2013; Sorenson, 2011).

In general, our conceptual model aligned well with Addis and Mahalik's (2003) gender theory on male help seeking, including their central constructs of (1) normativity, (2) centrality, (3) reciprocity, (4) reactivity, and (5) control. The two strongest predictor variables as to whether men will access health care (i.e., barriers) in our model, for example, were embarrassment and feeling the provider does not respect them, reflective of normativity and control, respectively. Each of these factors are discussed in greater detail in the next section.

Our second hypothesis stated the strongest predictors of precluding factors to men accessing health care would be time, convenience, resources, fear, embarrassment, discomfort, and lack of awareness of health care options. This hypothesis was partially supported. Both embarrassment and time were significantly correlated with how recently men had accessed health care in the past year. When also examining the frequency of usage of the health care system, access to the health care system added to the partial support of this hypothesis.

Embarrassment was one of the two strongest predictors of how recently men accessed health care and may be evoked due to a perceived lack of control over one's body and health. Additionally, medical evaluations and procedures by nature can be invasive and personal, often requiring the patient to disrobe and allow the provider to inspect their body. This may place a man's perception of the situation out of his control as well as increase feelings of vulnerability (Banks, 2001; Evans, Frank, Oliffe, & Gregory, 2011; Tudiver & Talbot, 1999). The latter parallels Connell's (2005a) discussion as to how hegemonic masculinity, particularly dominance and control, play roles in men seeking help. Men may view seeking help (in this case health care) as a perceived threat to their evaluation of masculinity as well as social pressures to conform to these norms (Addis & Mahalik, 2003; Galdas, Cheater, & Marshall, 2005).

The second strongest predictor variable in our model was the perception that one's health care provider does not respect them. This finding seems to align with Addis and Mahalik's (2003) gender norms theory concerning reciprocity and, again, control. This transactional nature (i.e., reciprocity) may lead to difficulties when one of the participants in the process (in this case, medical interactions) views the other as unequal or as a lesser. As the nature of health care assumes a power dynamic between provider and patient (see Jagosh, Boudreau, Steinert, MacDonald, & Ingram, 2011, for an extended discussion), we feel that this possibly conflicts with a man's ability to reciprocate and/or contribute to the decision-making process. This may be perceived as a lack of "respect" which males tend to value greatly (Connell, 2005a; Connell 2005b). Moreover, control, as previously described, is also sacrificed during most health care interactions (see Evans et al., 2011). The perception of not feeling respected by one's health care provider, therefore, may also be a consequence of remitting control during the process.

Highlighting the above example, in our previous work conducting qualitative individual interviews to build our conceptual model, some participants felt "degraded or demeaned" by health care providers, which often led to distancing themselves from health care in general. As

one Latino participant noted, "It is not just about the economics of healthcare, but your ability level to communicate with your doctor." This participant focused more on economics and respect as barriers to health care, whereas other research with Latino men have found cultural factors, such as "machismo," manhood, functionality, and acculturation as being more influential in health care decisions and behaviors (Rovito & Leone, 2012; Sobralske, 2006). Interestingly, neither embarrassment nor feeling disrespected by their health care provider was statistically significant (in the regression) for women in our sample. Women may be more accustomed to accessing health care and are thus, more at ease with interactions or they are treated more empathetically by their provider possibility easing anxiety and embarrassment.

We also evaluated our results keeping in mind factors corresponding to our use of theory—specifically hegemonic masculinity theory, TNC, and the HBM. Our results paralleled Addis and Mahalik's (2003) model concerning help seeking in men, particularly for normativity, reciprocity, reactivity, and control. Only the concept of "centrality" (i.e., Is this problem a part of me?) was unsupported. The latter is likely due to the limitations of the wording of the questions accessing this dimension of Addis and Mahalik's (2003) research model. Future work should confirm or refute this concept with better wording of questions. The authors, however, suggest that gender norms could perhaps play a significant role in male health care-seeking behaviors.

Using hegemonic masculinity theory (Connell, 2005a), we explored whether predictors of men not accessing health care would be due to a threat to perceived masculinity (macho/machismo), stigma, reactivity, and weakness/vulnerability. However, stigma and weakness/vulnerability did not play a role in the prediction model. This was somewhat of a surprise being that male gender norms and masculinity are closely related such that endorsement of male gender role norms often prompts some men to adopt a hypermasculine (i.e., hegemonic masculinity) ideal (Connell, 2005b). We found less rigid gender role norms in our participants. This is likely reflected by the diverse nature of our sample, particularly as their mean age was 35 years. Research suggests younger males are less likely to adopt strict gender roles and endorse hegemonic masculine ideals as previous generations of men (Connell, 2005a; Jewkes, Flood, & Lang, 2015). However, it is important to acknowledge that tremendous variability exists in the male population that may not have been captured in this cross-sectional study.

We also assessed our conceptual model as to whether the TNC would align to men not accessing health care. Specifically, we were interested in fatalism, denial, low awareness of risks, and low knowledge; this was

somewhat consistent. Fatalism and lack of knowledge did not achieve statistical significance in our model. These results actually may be encouraging as society being “normatively content” with poor male health outcomes (Leone & Rovito, 2013) may be changing; thus, men expecting to die sooner and adopting a fatalistic attitude toward risk and death may be positively progressing.

Similarly, men appeared to have an awareness/knowledge as to how to access health care, therefore, greater visibility of programming and government initiatives like the *Affordable Care Act* may serve to improve general knowledge concerning access. However, men still continue to endorse denial and low awareness of risks in terms of their health, thus creating potential barriers to preventative screenings and health care due to perceived low risk of health issues. Grogan and Jeffries (2012) note some males endorse an invincibility norm, particularly younger populations; this process may have been present in this study as the mean age was fairly young ($X = 35.36$ years). Further research should stratify by age to see if significant differences are noted. Additionally, more confirmatory work on the TNC is warranted.

Last, we explored the HBM (i.e., specifically perceived barriers), and speculated that the strongest predictors in our conceptual model to men not accessing health care would be fear, embarrassment, discomfort/unfamiliarity, coping mechanisms (fix it mentality), lack of resources (money, time), convenience, low awareness, and stress. Again, we found consistent alignment with these factors. With the exception of fear, discomfort/unfamiliarity, and low awareness, the remaining variables were statistically significant (Table 3). Having greater awareness of health care as demonstrated in our model may moderate fear of the unknown in medicine and may limit discomfort or unfamiliarity with the process. Again, this may be due to greater programming and viability of health care options (e.g., *Affordable Care Act*) as well as the relatively younger age of our sample. It is important to note that greater awareness and knowledge does not translate to action, therefore, measuring attitudes is critical in predicting access to health care. In fact, our results suggest men have a reasonable level of awareness as to how to access health care and reasons they should, however, and equally influential, was their endorsement of low perceived susceptibility, particularly as it relates to male gender role norms.

Gender Norms Versus Practicality and Utility in Accessing Health Care

Overall, interesting patterns were noted in our empirical assessment of our conceptual model. All of our hypotheses were at least partially supported as to why men may avoid accessing health care. Our findings appear to be

supportive of Addis and Mahalik's (2003) theory in terms of how masculinity and gender norms factor into health care decisions and help seeking in men. However, there also seems to be a reactive (i.e., “fix it” when broken) trend in our model in addition to the notion of being able to “cope” with illness, injuries, and disease. In a positive sense, men were aware of the components of the health care system, however, continued and greater efforts are needed in terms of how to properly navigate the health care system be it time, convenience, or general awareness of their overall health status. One issue consistent with men not accessing health care or trying to “fix” their own health conditions is how they tend to overestimate their health status (Springer & Mouzon, 2011). This normative assumption of health and a perceived health advantage runs parallel to concepts in the TNC (Leone & Rovito, 2013), where society tends to assume various health outcomes and behaviors as “normative” in men (e.g., men die sooner because it is the biological norm). The latter may relate to hegemonic masculinity theory (Connell, 2005a; Connell, 2005b) where men are supposed to be in control, dominant, stoic, and able to be resourceful in order to solve their own problems.

Based on the KFF report (James et al., 2012), cultural/ethnic factors and disparities also play a significant role in how men of color access and utilize health care. We found little support for race/ethnicity factoring into men not accessing health care in this sample. In fact, we found evidence of African American men being more receptive to accessing health care.

Cheatham, Barksdale, and Rodgers (2008) identified SES, masculinity, racism, lack of awareness of the need for primary care, religious beliefs, and peer influences as barriers to seeking health care services. We found some overlap in themes with research on Hispanic and Black men; however, our sample did not include a large percentage of minority men, thus limiting generalizability. What is clear from our research regardless of race and ethnicity, is that culture seems to stress hegemonic masculinity concepts and a “tough it out” mentality as noted by Porche (2010) and Addis and Mahalik (2003).

Context is very important in understanding how men of color engage with the health care system as noted by Thorpe, Bowie et al. (2013), who found Black men were actually *more* likely to seek preventative screenings in their sample, as also was the case in our study. Further research is warranted in order to investigate how racial, ethnic, and cultural factors play a role in men accessing health care so programming and public health initiatives can effectively plan and respond to the health care needs of men.

Finally, the HBM (Glanz, Rimer, & Viswanath, 2008; Hochbaum et al., 1952) appears to be useful in identifying

and using perceived barriers and perceived susceptibility to men accessing health care in future logic models and programming. Our model effectively used the HBM so as to identify perceived barriers (e.g., threatened masculinity, low perceived risk, and inconvenience) and perceived susceptibility (e.g., overestimating one's health status, fixing things themselves) so as to maximize enabling factors. Knowledge of how to modify perceived barriers to perceived benefits and realistically addressing perceived susceptibility through targeted programming with men can be used to introduce gender-sensitive and specific, meaningful initiatives. These ideals should be incorporated in men's health programming models from the outset in the preplanning stages (see Leone & Rovito, 2013, for a discussion of logic models).

Ultimately, this study helps partially predict/account for why men are 100% less likely than women to access preventative health care (Addis & Mahalik, 2003; Bertakis, Azari, Helms, Callahan, & Robbins, 2000; Bonhomme, 2007). Enrolling men in health care services and programs is one step in a complex series of meaningful engagements that can help advance not only men's health but also population health. Therefore, understanding the barriers to accessing health care and using them to construct more engaging health experiences for men is warranted (Pinkhasov et al., 2010).

These notions are further complicated by society's apparent "normalization" of men living with greater morbidity and experiencing mortality at higher rates (and at younger ages; Leone & Rovito, 2013). Based on these factors, it is imperative to account for how programs aimed at men's health leverage hegemonic masculinity, normative content, and how men perceive barriers (including cultural), incorporate these findings in their programming initiatives.

Toward Successful Programming in Men's Health

Viewed collectively, many organizations and programs have attempted to address issues concerning men's poor health status and outcomes. For example, outreach efforts have focused on community awareness of testicular and prostate cancers, heart health, and age-appropriate health screenings (Courtenay, 2000). More successful programming that actually does more than raise awareness and prompts men to act on their health, however, is far less common and not well-studied (Levant et al., 2011). Action is needed to achieve sustainable health improvement in men of all ages and backgrounds so as to address the persistent health disparities in men. Theoretically and empirically salient purposeful programming to account for barriers and enablers to access, is needed to fulfill the promises of a true public health.

Limitations and Strengths

We must account for limitations that may affect the interpretability and generalizability of our findings. We used a nonprobability sample; thus, we may not have been able to fully appreciate all participant views. Furthermore, due to the convenience sampling techniques, our data are limited in their ability to be generalized to the larger population. Although our sample included 21.2% non-Hispanic Whites, further research should specifically explore experiences of men of diverse ethnicities and racial backgrounds so as to better target programs by accounting for unique barriers.

The survey itself was cross-sectional and correlational in nature; therefore, we are not able to establish causality. The correlational coefficients are weak-to-moderate (generally below .40), but do give some comprehensive insight into the factors that influence the likelihood of men accessing health care. Only online administration of the survey was used, therefore, we may not have accessed views from participants who may not use such technology. Future research should explore multiple methods (e.g., paper-based) of survey administration to capture a greater variety of perspectives. Participants also may have not answered the questions honestly or may have been biased on some responses due to gender and/or cultural factors. In order to control/minimize the latter limitation, we conducted a pilot study on the initial instrument (MHQ) that yielded acceptable reliability ($\alpha = .88$) as well as subjected it to expert review for validity. These limitations should be taken into account when interpreting our findings.

To the authors' knowledge, this is the first study to develop a theoretically based and empirically validated conceptual model of what precludes men from seeking access to health care. Multiple methods were used in the model development (content analysis, review of extant literature, key informant interviews, individual interviews, and quantitative analysis), which can be viewed as a robust study design/approach. Our approach helps contextually frame a very complex social phenomenon (i.e., precluding factors to men accessing health care). Developing a conceptual model using both secondary and primary data sets also adds strength to this study in better informing future programming and policy in health care targeting men.

Addis and Mahalik's (2003) theory is substantial in explaining help-seeking behaviors in men; however, lacking were other factors that play into men avoiding accessing health care, that is, factors beyond masculinity. Our conceptual model identified factors beyond masculinity such as economic constraints, lack of education/awareness, and cultural issues. This research identified support, help seeking, barriers, and systematic barriers (e.g., resources, time), as factors that preclude men from

accessing health care. While there is obvious utility to Addis and Mahalik's masculinity theory, perspectives and themes offered were only garnered from physicians. Our research is more recent and sought ideas and perspectives from a general population, which likely adds more generalizability of our findings. Findings by Davies et al. (2000) also partially support our model factor on lacking education or needing more information to make health decisions. Conclusions from their research in helping men adopt healthier lifestyles would be offering more health classes, providing a call-in information service, and developing men's health centers. Again, these findings are important to consider; however, a limitation of their research is that it only used qualitative methods and only sampled a college-aged population. Our research used empirical methods with an age-diverse sample further highlighting the strengths of our study.

Practical Application

This research sheds light on what may preclude men from accessing health care. Empirical support of this model may assist public health professionals to devise more gender-specific and targeted health education programming for men. Understanding potential barriers may help better target behavioral enablers when engaging men in health care settings and community health programs. Factors identified in our conceptual model provide a framework from which health communications, health education, and public health outreach initiatives may use in keeping in touch with what men respond to and what motivates them (e.g., competition, performance, male interests). As Kurtzman (2014) notes in her commentary, we (public health professionals) need to help men make healthy lifestyle changes, bring men into health conversations about themselves and their families, and challenge gender roles that help men rethink masculinity.

Using our model may assist researchers, policy makers, and program planners in improving access, enhancing health-related quality of life, and reducing early morbidity and mortality in men. Based on the data provided, this may seem like a monumental task; however, if we continue to explore how health behaviors are shaped by social norms in addition to intrapersonal factors and processes, we may see men's health improve in accordance with *Healthy People's* goals of reducing and eliminating health disparities. Attention to men's health may propel the "tide that lifts all boats" in health equity (Bonhomme, 2007).

Conclusion

As populations change so too do gender norms, men notwithstanding. These "new" men and masculinities

(Jeffries & Grogan, 2012) will require policies and programs that are adaptable and responsive to their diverse and unique needs. The value of understanding why men are less likely to seek health care is apparent when viewing this phenomenon from the level of poorer health outcomes and early morbidity and mortality. Programs targeting risky health behaviors and conditions in men, that if caught early, can be treated and/or resolved, and needs to be able to account for potential barriers. Incorporating empirically supported models (as in the case with our research) in preventative public health programming aligns well with best practice, evidence-based medicine and may help address *Healthy People 2020's* called to "eliminate health disparities in all groups." Results from this study provide a valid and reliable potential model to incorporate in current and future men's health programs, policy, and community advocacy efforts; however, additional qualitative work also will add valuable perspective to this complex, multidimensional health issue. Further research is warranted in testing how factors identified in this model can help improve overall men's health with particular emphasis on gender norms and masculinity versus practical and utilitarian reasons.

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References

- Addis, M. E., & Mahalik, J. R. (2003). Men, masculinity, and the contexts of help seeking. *American Psychologist, 58*, 5-14.
- Banks, I. (2001). No man's land: Men, illness, and the NHS. *British Medical Journal, 323*, 1058-1060.
- Bertakis, K. D., Azari, R., Helms, L. J., Callahan, E. J., & Robbins, J. A. (2000). Gender differences in the utilization of health care services. *Journal of Family Practice, 49*, 147-152.
- Bonhomme, J. J. (2007). Men's health: Key to healthier women, children, and communities. *American Journal of Men's Health, 1*, 335-338.

- Brott, A., Dougherty, A., Williams, S. T., Matope, J. H., Fadich, A., & Taddelle, M. (2011). The economic burden shouldered by public and private entities as a consequence of health disparities between men and women. *American Journal of Men's Health, 5*, 528-539. doi:10.1177/1557988311421214
- Centers for Disease Control and Prevention. (2007). *Leading causes of death in males United States, 2007*. Retrieved from <http://www.cdc.gov/men/lcod/index.htm>
- Cheatham, C. T., Barksdale, D. J., & Rodgers, S. G. (2008). Barriers to health care and health-seeking behaviors faced by Black men. *Journal of the American Academy of Nurse Practitioners, 20*, 555-562. doi:10.1111/j.1745-7599.2008.00359.x
- Connell, R. W. (2005a). Change among the gatekeepers: Men, masculinities, and gender equality in the global arena. *Signs, 30*, 1801-1825.
- Connell, R. W. (2005b). *Masculinities* (2nd ed.). Berkeley: University of California Press.
- Courtenay, W. H. (2000). Endangering health: A social constructionist examination of men's health beliefs and behaviors. *Psychology of Men & Masculinity, 1*, 4-15.
- Davies, J., McCrae, B. P., Frank, J., Dochnahl, A., Pickering, T., Harrison, B., . . . Wilson, K. (2000). Identifying male college students' perceived health needs, barriers to seeking help, and recommendations to help men adopt healthier lifestyles. *Journal of American College Health, 48*, 259-267.
- Evans, J., Frank, B., Oliffe, J. L., & Gregory, D. (2011). Health, illness, men and masculinities (HIMM): A theoretical framework for understanding men and their health. *Journal of Men's Health, 8*, 7-15.
- Fortuna, R. J., Robbins, B. W., & Halterman, J. S. (2009). Ambulatory care among young adults in the United States. *Annals of Internal Medicine, 151*, 379-385.
- Galdas, P. M., Cheater, F., & Marshall, P. (2005). Men and health help-seeking behaviour: Literature review. *Journal of Advanced Nursing, 49*, 616-623. doi:10.1111/j.1365-2648.2004.03331.x
- Gerschick, T. J., & Miller, A. S. (1994). Gender identities at the crossroads of masculinity and physical disability. *Men and Masculinities, 2*(1), 34-55.
- Glanz, K., Rimer, B. K., & Viswanath, K. (2008). *Health behavior and health education: Theory, research, and practice* (4th ed.). San Francisco, CA: Jossey-Bass.
- Gough, B. (2006). Try to be healthy, but don't forgo your masculinity: Deconstructing men's health discourse in the media. *Social Science & Medicine, 63*, 2476-2488.
- Haddad, R. M., Kennedy, C. C., Caples, S. M., Tracz, M. J., Boloña, E. R., Sideras, K., & Montori, V. M. (2007). Testosterone and cardiovascular risk in men: A systematic review and meta-analysis of randomized placebo-controlled trials. *Mayo Clinic Proceedings, 82*, 29-39. doi:10.4065/82.1.29
- Hochbaum, G., Rosenstock, I., & Kegels, S. (1952). *Health belief model*. Washington, DC: U.S. Public Health Service.
- Jagosh, J., Boudreau, J. D., Steinert, Y., MacDonald, M. E., & Ingram, L. (2011). The importance of physician listening from patients' perspective: Enhancing diagnosis, healing, and the doctor-patient relationship. *Patient Education and Counseling, 85*, 369-374.
- James, C., Salganicoff, A., Ranji, U., Goodwin, A., & Duckett, P. (2012). *Putting men's health care disparities on the map: Examining racial and ethnic disparities at the state level* (Kaiser Family Foundation Report). Retrieved from <https://kaiserfamilyfoundation.files.wordpress.com/2013/01/8344.pdf>
- Jeffries, M., & Grogan, S. (2012). "Oh, I'm just, you know, a little bit weak because I'm going to the doctor's": Young men's talk of self-referral to primary healthcare services. *Psychology & Health, 27*, 898-915.
- Jewkes, R., Flood, M., & Lang, J. (2015). From work with men and boys to changes of social norms and reduction of inequities in gender relations: A conceptual shift in prevention of violence against women and girls. *Lancet, 385*, 1580-1589.
- Keppel, K., Garcia, T., Hallquist, S., Ryskulova, A., & Agress, L. (2008). *Comparing racial and ethnic populations based on Healthy People 2010 objectives* (Healthy People Statistical Notes, 26). Retrieved from <https://www.cdc.gov/nchs/data/statnt/statnt26.pdf>
- Kurtzman, L. (2014). *Commentary: It's time to address the health of men around the world: International/UCSF team urges attention to both genders in public health*. Retrieved from <http://www.ucsf.edu/news/2014/07/116456/commentary-it-s-time-address-health-men-around-world>
- Leone, J. E., & Rovito, M. J. (2013). "Normative Content" and health inequity enculturation: A logic model of men's health advocacy. *American Journal of Men's Health, 7*, 243-254. doi:10.1177/1557988312469659
- Levant, R. F., Wimer, D. J., & Williams, C. M. (2011). An evaluation of the Health Behavior Inventory-20 (HBI-20) and its relationship to masculinity and attitudes towards seeking psychological help among college men. *Psychology of Men & Masculinity, 12*, 26-41.
- Macdonald, J. J. (2006). Shifting paradigms: A social determinants approach to solving problems in men's health policy and practice. *Medical Journal of Australia, 185*, 456-458.
- National Center for Health Statistics. (2010). *Health, United States, 2009: In brief—Medical technology*. Hyattsville, MD: U.S. Department of Health & Human Services.
- Pinkhasov, R. M., Wong, J., Kashanian, J., Lee, M., Samadi, D. B., Pinkhasov, M. M., & Shabsigh, R. (2010). Are men shortchanged on health? Perspective on health care utilization and health risk behavior in men and women in the United States. *International Journal of Clinical Practice, 64*, 475-487. doi:10.1111/j.1742-1241.2009.02290.x
- Porche, D. J. (2010). Healthy Men 2020. *American Journal of Men's Health, 4*, 5-6.
- Rovito, M. J., & Leone, J. E. (2012). Faith and masculinity: A discussion on raising awareness and promoting wellness among Latino men. *Californian Journal of Health Promotion, 10*, 70-77.
- Singh, G. K., Azuine, R. E., Siahpush, M., & Kogan, M. D. (2013). All-cause and cause-specific mortality among

- U.S. youth: Socioeconomic and rural-urban disparities and international patterns. *Journal of Urban Health, 90*, 388-405.
- Sobralnske, M. C. (2006). Health care seeking among Mexican American men. *Journal of Transcultural Nursing, 17*, 129-138. doi:10.1177/1043659606286767
- Sorenson, S. B. (2011). Gender disparities in injury mortality: Consistent, persistent, and larger than you'd think. *American Journal of Public Health, 101*(Suppl. 1), S353-S358.
- Springer, K. W., & Mouzon, D. M. (2011). "Macho men" and preventative health care: Implications for older men in different social classes. *Journal of Health and Social Behavior, 52*, 212-227.
- Thorpe, R. J., Bowie, J. V., Wilson-Frederick, S. M., Coa, K. I., & LaVeist, T. A. (2013). Association between race, place, and preventive health screenings among men: Findings from the exploring health disparities in integrated communities study. *American Journal of Men's Health, 7*, 220-227.
- Thorpe, R. J., Richard, P., Bowie, J. V., LaVeist, T. A., & Gaskin, D. J. (2013). Economic burden of men's health disparities in the United States. *International Journal of Men's Health, 12*, 195-212.
- Tudiver, F., & Talbot, Y. (1999). Why don't men seek help? Family physicians' perspectives on help-seeking behavior in men. *Journal of Family Practice, 48*(1), 47-52.
- U.S. Department of Health & Human Services. (n.d.). *Healthy People 2020: About healthy people*. Retrieved from <http://www.healthypeople.gov/2020/about/default.aspx>
- White, A., de Sousa, B., de Visser, R., Hogston, R., Madsen, S. A., Makara, P., . . . Zatonski, W. (2011). Men's health in Europe. *Journal of Men's Health, 8*, 192-201.
- Wilkins, D. (2010). Men's health. *Perspectives in Public Health, 130*, 201.
- Williams, D. (2003). The health of men: Structured inequalities and opportunities. *American Journal of Public Health, 93*, 724-731.
- Zhang, L., Kerich, M., Schwandt, M. L., Rawlings, R. R., McKellar, J. D., Momenan, R., & George, D. T. (2011). Smaller right amygdala in Caucasian alcohol-dependent male patients with a history of intimate partner violence: A volumetric imaging study. *Addiction Biology, 18*, 537-547. doi:10.1111/j.1369-1600.2011.00381.x