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Masculinity in the doctor's office: Masculinity, gendered doctor preference and doctor–patient communication

Mary S. Himmelstein *, Diana T. Sanchez

Rutgers University, The State University of New Jersey, United States

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ABSTRACT

Objective. Mortality and morbidity data suggest that men have shorter life expectancies than women and outrank women on several leading causes of death. These gendered disparities may be influenced by psychosocial factors like masculinity.

Methods. Three studies (Total N = 546) examined the role of masculinity in men's doctor choices and doctor–patient interactions. In Studies 1 and 2, men completed measures of masculinity, gender bias, and doctor preference. Using structural equation modeling, we tested the direct relationship between masculinity and male doctor preference and the indirect relationship of masculinity on male doctor preference through an association with gendered competence stereotypes. Participants in Study 3 disclosed symptoms in private followed by disclosure to a male or female interviewer in a clinical setting. Using repeated measures analysis of variance (ANOVA), we examined the interaction among symptom reporting, masculinity and doctor gender, controlling for participant comfort.

Results. In Study 1, results suggested that masculinity encouraged choice of a male doctor directly and indirectly via beliefs that men make more competent doctors than women; Study 2 directly replicated the results of Study 1. In Study 3, independent of participant comfort, an interaction between interviewer gender and masculinity emerged such that men scoring higher on masculinity reported symptoms less consistently to male interviewers (relative to higher scoring men reporting to female interviewers); the reverse was found for men scoring low on masculinity.

Conclusions. Taken together these studies suggest that masculinity may affect men's health by encouraging choice of a male doctor with whom doctor–patient communication may be impaired.

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Introduction

Males can expect to die approximately five years sooner than females (Kochanek et al., 2011) and men outrank women on causes of death associated with chronic disease (Schiller et al., 2012). Masculinity is implicated in creating these disparities by increasing risk behavior (Peralta et al., 2010), increasing stress (Levant et al., 2011), and decreasing help-seeking behaviors (Mansfield et al., 2003; Himmelstein and Sanchez, 2014). These studies examine a theoretical model related to healthcare which may partially explain these health disparities. Specifically, this paper examines whether masculinity may encourage preference for a male doctor with whom doctor–patient communication is impaired.

Masculinity refers to men's endorsement of male role norms (e.g., status, toughness and anti-femininity). Research suggests toughness and anti-femininity concern avoidance of weakness and emotionality (Thompson and Pleck, 1986; Davies et al., 2000; O'Brien et al., 2005), both of which have implications for health. Status beliefs, however, are not associated with health behavior (Berger et al., 2005; Good et al., 1989). Masculine norms influence men's behavior when men endorse these masculine ideals or feel threatened (Thompson and Pleck, 1986; Prentice and Carranza, 2002; Rudman and Glick, 2001). An important aspect of masculinity involves the theory of precarious manhood which suggests that masculinity must be demonstrated through behavior, and can be easily lost via behaviors inconsistent with masculine norms (e.g., weakness, feminine behavior in men, see Vandello et al., 2008). Behaviors associated with masculinity are largely policed by other men, and men are shamed by peers when behaving in ways inconsistent with masculine norms (Pascoe, 2005; Kimmel, 2009). This study defines masculinity by how much men endorse toughness, anti-femininity (i.e., disdain for men taking on feminine roles), and precarious manhood (i.e., the extent to which men believe that masculinity can be lost). Masculine traits and precarious manhood beliefs are important for men's health for several reasons. First, if men do not endorse precarious manhood then they should have no fear of losing masculine capital by displaying weakness at a doctor's appointment, even if they embrace masculine traits of toughness and anti-femininity. Second, masculine norms (e.g., toughness and anti-femininity), and precarious

* Corresponding author at: Department of Psychology, Rutgers University, 53 Avenue E., Livingston Tillett Hall, Piscataway, NJ 08854, United States.
E-mail address: mary.himmelstein@gmail.com (M.S. Himmelstein).

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manhood beliefs negatively affect men's health (Courtenay, 2000) via stress, risky behaviors, avoidance of self-care, and poor adherence to medical advice (Levant et al., 1998; Addis and Mahalik, 2003; Vandello and Bosson, 2013). Men who endorse toughness, anti-femininity and precarious manhood avoid preventative care, delay acute care, miss scheduled health appointments, and refuse help for emotional and behavioral problems (Himmelstein and Sanchez, 2014; Mahalik et al., 2007; Mahalik and Lagan, 2006). Indeed, older men with the strongest endorsement of masculinity are about half as likely to receive preventative care (compared to men with moderate masculinity scores), and protective factors associated with health (socio-economic-status) do not protect men with the highest scores on masculinity from health issues (Springer and Mouzon, 2011). This paper fills a gap in the literature on masculinity by explaining one way in which masculinity may affect these health outcomes — via a preference for male doctors with whom symptom reporting may be impaired.

Though men report no doctor preference by gender (Ackerman-Ross and Sochat, 1980; Graffy, 1990; Schmittdiel et al., 2000), only a quarter of men choose a female doctor when given the choice between a male or female (Ackerman-Ross and Sochat, 1980; Graffy, 1990; Fennema et al., 1990). Preference for male doctors emerges in specialized medicine (e.g., neurology, surgery, see Kerssens et al., 1997). Masculinity is widely associated with gender bias (Rudman and Glick, 2001; Rudman and Kilianski, 2000; Rudman and Fairchild, 2004; Kilianski, 2003), which includes the idea that women are less competent than men in science and medicine (Prentice and Carranza, 2002; Rudman et al., 2012). Thus, masculinity may influence preference for male doctors, but the relationship between masculinity and male doctor preference may be mediated by gender bias.

In medical settings, men report fewer symptoms than women, and report less pain than women at equivalent levels of pathology (Addis and Mahalik, 2003; Courtenay, 2003). Men legitimize their masculinity by denying needs related to health (Springer and Mouzon, 2011; Courtenay et al., 2002), controlling medical decisions, and denying the need for care (Calasanti, 2004). Thus, we know masculinity influences healthcare seeking, but it may also influence men's willingness to disclose symptoms in clinical settings. If men endorse masculinity, they may underreport their symptoms to avoid being perceived as weak, and thus suffering a loss in masculinity. Masculinity may influence doctor–patient communication by discouraging symptom reporting to other men despite simultaneously encouraging preference for male doctors, because men are involved in policing and punishing non-masculine behavior (Pascoe, 2005; Kimmel, 2009).

Present research

These studies suggest a potential pathway by which masculinity affects health: impaired doctor–patient communication which occurs via preference for a male physician. Given masculinity is associated with gender bias (Kilianski, 2003), we theorize that this may prompt preference for male doctors if masculine men believe that women make less competent doctors (Studies 1 and 2). We hypothesized an association between masculinity and male doctor preference, but expected the effect to be mediated by the belief that men make better doctors than women. Male doctor preference may be problematic because it could encumber symptom reporting if men are concerned over showing weakness in front of other men (Study 3). We hypothesized an interaction between masculinity and interviewer gender, such that higher scores on masculinity would be associated with impaired reporting to male interviews relative to female interviews, but lower scores on masculinity would not affect symptom reporting. Symptom underreporting impedes early detection of disease and hampers appropriate care (Leonard, 2004; Fallowfield and Jenkins, 1999; Ong and De, 1995). Gender related health disparities may be partially explained by differences in doctor–patient interaction associated with masculinity.

Studies 1 & 2

Methods

Participants

Studies 1 and 2 recruited men who were fluent in English and residing in the United States from Mechanical-Turk, which is a reliable and diverse online participant pool (Buhrmester et al., 2011; Paolacci et al., 2010). Following guidelines for structural equation modeling (SEM, see Kline, 2011a) we aimed for a sample size of 150–200 participants per study. We stopped recruiting when the study samples reached 150, but collected a few residual participants completing the link when the advertisement was closed, resulting in sample sizes of 152 in Study 1 and 155 in Study 2. Data were examined for response sets by examining the standard deviation for question sets with ten or more items. Participants whose responses did not vary were eliminated (Study 1 $n = 6$, Study 2 $n = 5$) leaving a final sample size of 146 in Study 1 and 150 in Study 2. Samples ranged in age from 18 to 72 ($M = 34.14$, $SD = 13.25$) in Study 1 and 18 to 76 ($M = 34.36$, $SD = 11.44$) in Study 2. Participants identified as White (74.7%/69.3%), Black (8.9%/10.7%), Asian (8.2%/8.0%), Hispanic or Latino (6.2%/8.0%), and other (2.1%/3.3%). Participants rated household income on a 14 point scale ranging from 1 (less than $15,000) to 14 (greater than $200,000). Mean household income was 5.48 representing 40 to 60 thousand dollars annually ($SD = 3.22$, *Median* "40,000–50,001") in Study 1 and 4.99 representing 40 to 50 thousand dollars annually in Study 2 ($SD = 3.21$, *Median* "30,000–40,001").

Procedure

Participants responded to an advertisement for a study of healthcare dynamics for men. After completing an informed consent, participants were compensated monetarily (<$1) for completing a brief online survey. The survey included questionnaires on masculinity, doctor preferences, and gender bias in a random order. Participants completed two attention checks to ensure that they read questions carefully. Questions on demographics were asked at the end of the survey. All procedures were approved by the Institutional Review Board (IRB). Descriptive statistics and reliability estimates may be found in Table 1; example items for each scale may be found in the Supplementary material.

Masculinity

Participants completed two measures of masculinity: precarious manhood (PM: 6 items) (Vandello et al., 2008) and the Male Role Norms scale (MRN: 7 items on toughness, 8 items on anti-femininity) (Thompson and Pleck, 1986). Both scales were rated on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The MRN scale was used because it is (1) brief and (2) one of the most common measures of masculinity in the literature (>400 citations). We chose these subscales because toughness is associated with poor health outcomes in men (Courtenay, 2003), and anti-femininity (i.e., disdain for feminine

Table 1
Means, standard deviations and reliability estimates for all modeled variables in Studies 1 & 2.

	Study 1			Study 2		
	M	*SD*	α	*M*	*SD*	α
1. Precarious manhood	2.93	0.77	0.76	2.78	0.84	0.82
2. Toughness	3.07	0.72	0.76	2.97	0.71	0.74
3. Antifemininity	2.61	0.86	0.84	2.34	0.89	0.86
4. Gendered trait competence	3.59	0.74	0.70	3.44	0.79	0.79
5. Gendered medical competence	3.25	0.89	0.74	3.47	0.93	0.79
6. Male doctor preference	2.47	1.16	0.89	13.41	1.56	0.92

Note. Competence items were measured on a scale of 1 to 6. All other scales were rated as 1 to 5. The reliability presented for male doctor preference represents a correlation rather than a Cronbach's alpha.

behavior in men) is associated with gender bias (Kilianski, 2003). As discussed above, we measured PM because the belief that masculinity can be lost via behavioral action represents an important theoretical reason why men may conceal health information; we included PM in all three studies for consistency.

Gendered trait competence

Drawing from stereotyping research (Fiske et al., 2007), participants rated the extent to which traits associated with competence were more typical of women or men on a scale of 1 (*more typical of women*) to 6 (*more typical of men*). The anchor points of the scale were counter-balanced (top anchor was flipped: men/women), but items were coded so higher scores reflect the belief that males are more competent than females.

Gendered medical competence

Gendered medical competence was measured using four items adapted from real measures of medical competence used to assess medical residents (Mavis et al., 2005; Day et al., 1987). Participants rated each item on a scale of 1 (*female doctors are better at this skill*) to 6 (*male doctors are better at this skill*). The anchor points were counter-balanced, but items were coded so higher scores reflect the belief that men are more competent than women in medicine.

Male doctor preference

Gendered doctor preference consisted of two questions assessing the importance and preference of having a male doctor rated on a scale of 1 (*not at all important/preferable*) to 5 (*very important/preferable*).

Data analysis

We tested the hypothesized model using SEM with masculinity as a latent factor comprised of PM and both subscales of the MRN. In terms of model fit, following Kline (2011b), a good model should meet the following criteria: non-significant chi-square test of model fit, root mean square error of approximation (RMSEA) less than or equal to 0.08, a comparative fit index (CFI) greater than or equal to 0.90 and a Tucker Lewis Index (TLI) greater than or equal to 0.90. Bootstrapping determined mediation in both studies.

Results

Correlations among all variables included in the model may be found in Table 2.

Study 1

The hypothesized model fit well to data (see Fig. 1): χ^2 (7) = 8.89, p = .260; RMSEA = 0.04 (0.00, 0.12); CFI = 0.99; and TLI = 0.98. As expected, masculinity directly affected male doctor preference (B = 0.42, p = 0.011), and indirectly affected male doctor preference through gendered medical competence (Bootstrapped CI: 0.20, 0.61, masculinity to medical competence: B = 0.38, p = .016; medical competence to male doctor preference: B = 0.42, p < .001). Contrary to predictions, masculinity did not predict gendered trait competence (B = 0.01, p = .938) and gendered trait competence did not directly predict male doctor preference (B = −0.09, p = .447). Removing gendered trait competence (given it was not predicted by or predictive of other variables) from the model yielded similar results.

Table 2
Inter-item correlations between modeled variables in Studies 1 & 2.

	1	2	3	4	5	6
1. Precarious manhood	–	**0.67*****	**0.61*****	**−0.13**	**0.12**	**0.23****
2. Toughness	0.65***	–	**0.61*****	**−0.05**	**0.14**	**0.20***
3. Antifemininity	0.59***	0.60***	–	**−0.01**	**0.22*****	**0.33*****
4. Gendered trait competence	−0.05	−0.01	0.09	–	**0.009**	**0.01**
5. Gendered medical competence	0.24**	0.20*	0.20*	0. 12	–	**0.44*****
6. Male doctor preference	0.29***	0.19**	0.26***	−0.02	0.38***	–

Note. Study 1 correlations are presented in the bottom half of the table. Study 2 correlations are presented in the top half of the table in bold.
* p < .05.
** p < .01.
*** p < .001.

Study 2

The hypothesized model fit well to data (see Fig. 1): χ^2 (7) = 10.73, p = .151; RMSEA = 0.06 (0.00, 0.13); CFI = 0.98; and TLI = 0.96. As expected and replicating Study 1, masculinity directly affected male doctor preference (B = 0.52, p = 0.014), and indirectly affected male doctor preference through gendered medical competence (Bootstrapped CI: 0.45, 0.88; masculinity to medical competence: B = 0.27, p = .056; medical competence to male doctor preference: B = 0.67, p < .001). Replicating Study 1, masculinity did not predict gendered trait competence (B = −0.09, p = .400) and gendered trait competence did not directly predict male doctor preference (B = −0.03, p = .832). As in Study 1, dropping gendered trait competence from the model yielded similar results.

Discussion

Contrary to predictions, masculinity did not influence a general belief that men are more competent than women. Across two studies, masculinity was associated with preference for a male doctor directly. An indirect association existed between masculinity and male doctor preference via gender bias in medicine (belief that men were more competent in medicine than women), though this relationship was marginal in Study 2. Men preferring a male doctor over a female doctor only matters if choice of a male doctor somehow influences doctor–patient communication. With this in mind, the third study investigated the interplay among doctor gender, masculinity, and symptom reporting in a clinical interaction.

In general, men report fewer and less intense symptoms compared to women (Barsky et al., 2001; Bush et al., 1993; Fillingim and King, 2009), which may be related to masculinity (Addis and Mahalik, 2003). Explanations for gender differences in symptom reporting are often ascribed to gender socialization, symptom labeling, and lack of desire to acknowledge discomfort among men (Barsky et al., 2001). In Study 3, we hypothesized that masculinity would moderate the relationship between doctor gender and symptom reporting. Research (Pascoe, 2005; Kimmel, 2009) suggests that men police and punish masculinity violations including weakness displays. Thus, we expected higher scores in masculinity to be associated with less consistent reporting of symptoms (time 1 to time 2) to male health professionals compared to female health professionals. We expected no difference in symptom reporting (time 1 to time 2) to male or female health professionals among men with lower scores on masculinity. Given participant comfort is important for doctor–patient communication (Dorr Goold and Lipkin, 1999), we controlled for participant comfort in our analysis.

Study 3

Methods

Participants

In exchange for partial course credit, 250 males completed this study. A total of 4 participants (1.6%) were excluded because of outlying values on age (n = 3, mean age greater than 26, 3 *SD* above the mean for age) or symptom values at time 1 (n = 1, mean symptoms at time 1 greater than 3.57, 3 *SD* above the mean for symptoms at time 1). The final sample consisted of 246 participants who ranged in age from

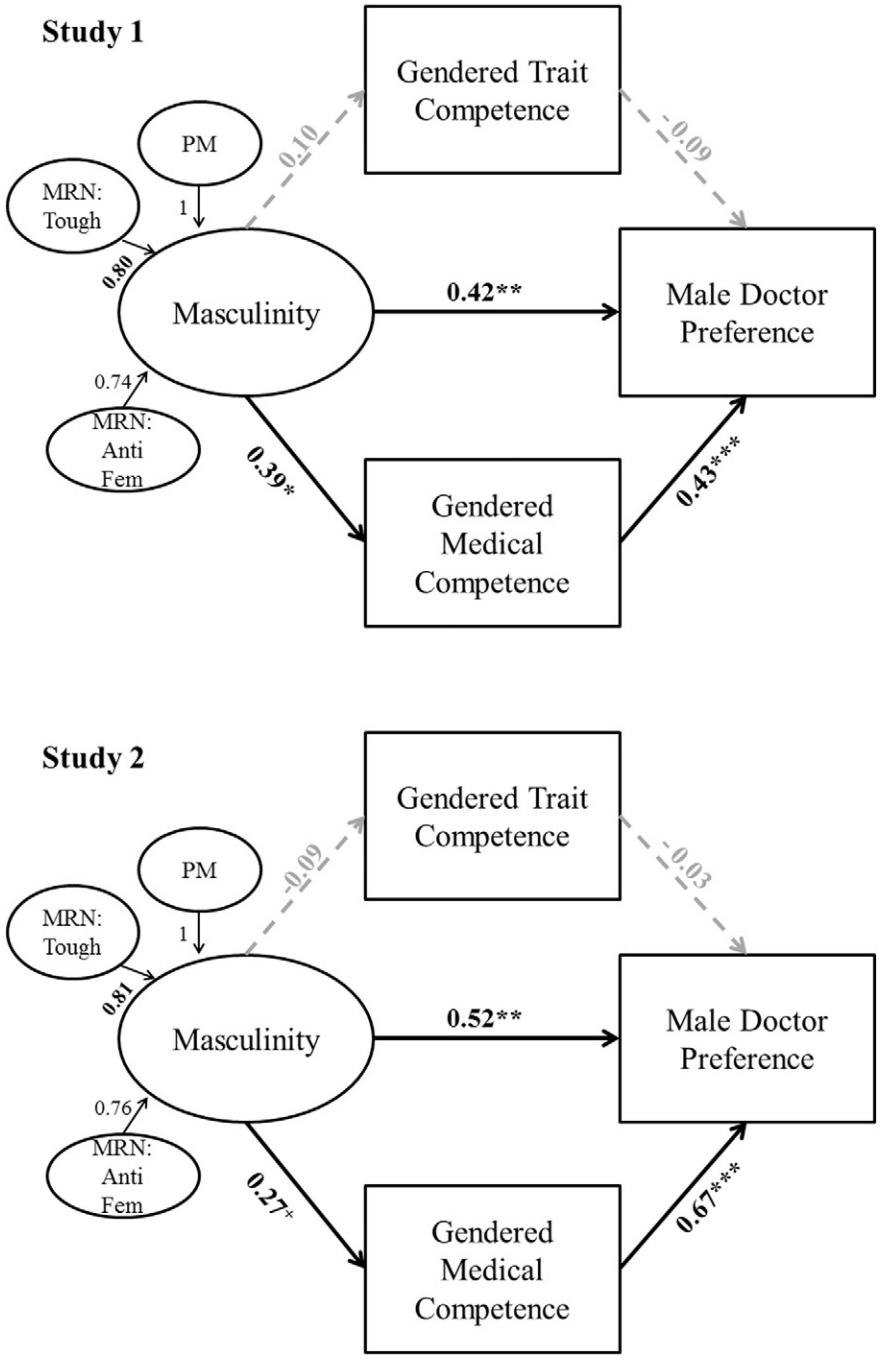

Fig. 1. Models of male doctor preference in Studies 1 and 2. Study 2 directly replicates Study 1. The models demonstrate that masculinity and gender bias independently contribute to male doctor preference. *$p < .05$. **$p < .01$. ***$p < .001$.

18 to 25 ($M = 18.89$, $SD = 1.40$) and identified as White (32.5%), Asian (32.9%), Hispanic or Latino (12.2%), Black (9.3%), and other (13.0%: Native American, Middle Eastern or Multiracial). Participants rated household income on a 14 point scale ranging from 1 (*less than $15,000*) to 14 (*greater than $200,000*). Mean household income was 8.30 representing 70 to 80 thousand dollars annually ($SD = 3.96$, *Mdn* 9 "80,000–90,001").

Procedure

Participants completed a prescreening measure, at their leisure, prior to their scheduled appointment, which included the masculinity items and five common, chronic health symptoms (symptoms at time 1); timing between the prescreen measure and lab session varied. We chose common, chronic symptoms to minimize the possibility that symptoms resolved between the prescreening measure and lab visit. Participants arrived for their appointment and were greeted by a male or female interviewer wearing a white lab coat and carrying a patient chart for a simulated doctor–patient interaction; four interviewers (two males, two females) ran all participants with each running approximately 62 participants. All interviewers were senior students enrolled in a pre-medicine or nursing track. Interviewers brought participants to a fully-functional clinical examination room where participants completed an informed consent. Participants were told that the interviewers were students enrolled in pre-medicine who were interested in gaining clinical experience. In the clinical exam room, participants sat on an examination table and interviewers sat on a rolling stool. Participants

completed a symptom checklist with the interviewer. Interviewers were blind to the masculinity score of the participant, the purpose of the study, and the prescreen report of symptoms. All procedures were approved by the IRB. Descriptive statistics for each variable may be found in Table 3.

Masculinity

As in Studies 1 and 2, masculinity was measured as PM. Because of prescreen brevity, we were unable to collect male role norms as a measure of masculinity in Study 3. We measured PM because the belief that masculinity can be lost via behavioral action represents an important theoretical reason why men may conceal health information.

Comfort

We included a measure of comfort in order to demonstrate that masculinity moderated the relationship between doctor gender and symptom reports independent of participant comfort. The interviewers received training on coding non-verbal behavior for discomfort; they rated how comfortable the participant behaved during symptom reporting using a single item on a scale of 1 (*very uncomfortable*) to 5 (*very comfortable*).

Symptom reports

Symptoms were assessed at two time points using 5 of 45 items from the Pennebaker Inventory of Limbic Languidness (PILL) (Pennebaker, 1982). Participants indicated the frequency of their health symptoms on a scale of 0 (*Never experienced this symptom*) to 4 (*Experience the symptom on a weekly basis*). We pretested the original 45 items, in a separate sample, and selected the five most common, chronic and most embarrassing symptoms (diarrhea, heartburn or gas, acne, uncontrollable worry and depressed mood). These five symptoms were assessed during pre-screening (symptom report 1) and during the lab session (symptom report 2).

Data analysis

A repeated measures ANOVA examined within-subject differences in symptom reports (symptom reports 1 and 2), as a function of masculinity, and interviewer gender controlling for participant comfort. Following guidelines (Aiken and West, 1991; Dawson, 2014), we interpreted significant interactions using simple slopes analysis by plotting parameter estimates, means and standard deviations of doctor gender and masculinity on symptom reporting.

Results

A repeated measures ANOVA yielded two significant interactions (see Table 4). Note that masculinity was entered as a continuous variable. In accordance with predictions, men with higher scores in masculinity reported fewer symptoms in the lab compared to their prescreen reports when reporting to a male interviewer relative to a female interviewer (see Fig. 2). Men with lower scores in masculinity reported fewer symptoms in the lab compared to their prescreen symptom reports when disclosing to a female interviewer relative to a male interviewer. The interaction among symptom change and interviewer gender indicated that participants disclosed more symptoms at time 1 relative to time 2, but the slope was more steep when reporting to a female interviewer at time 2 (indicating greater inconsistency in reporting time 1 to time 2) relative to reporting to a male interviewer at time 2.

Table 3
Means and standard deviations for variables in Study 3.

	M	*SD*
Symptoms time 1	1.65	0.63
Symptoms time 2	1.28	0.58
Precarious manhood	2.93	0.83
Comfort	3.60	1.01

Note. Symptoms were rated on a scale of 0 to 4. All other measures were rated on a scale of 1 to 5. The reliability estimate for PM was 0.73.

Table 4
Within subject effects of repeated measures ANOVA.

	F	*p*	η^2
Symptom change	1.73	.190	.01
Symptom change * comfort	0.81	.369	.00
Symptom change * interviewer gender	**4.29**	**.039**	**.02**
Symptom change * masculinity	2.70	.102	.01
Symptom change * interviewer gender * masculinity	**3.91**	**.049**	**.02**

Note. Significant effects are in bold. $df = (1, 240)$.

Discussion

This study demonstrated that independent of participant comfort, masculine men reported less consistent symptoms to male interviewers compared to female interviewers in a clinical setting, while men scoring low in masculinity exhibited the opposite pattern. This suggests that masculinity may encumber doctor–patient communication, which is problematic given the importance of doctor–patient communication in ensuring quality care (Fallowfield and Jenkins, 1999).

General discussion

These studies indicated that masculinity may act to encourage male doctor preference directly and indirectly through the belief that men make more competent doctors (marginal relationship in Study 2). This is problematic because masculinity also appears to encumber symptom reporting to male doctors in highly masculine men. Disclosing weakness via illness symptoms or embarrassing symptoms may prevent some men from being open and honest with other men about their physical symptoms, perhaps because disclosing weakness may be threatening to masculine identity. This is important because quality care hinges on a good relationship and effective communication between doctor and patient (Fallowfield and Jenkins, 1999; Ong and De, 1995; Quigley and Leonard, 1999).

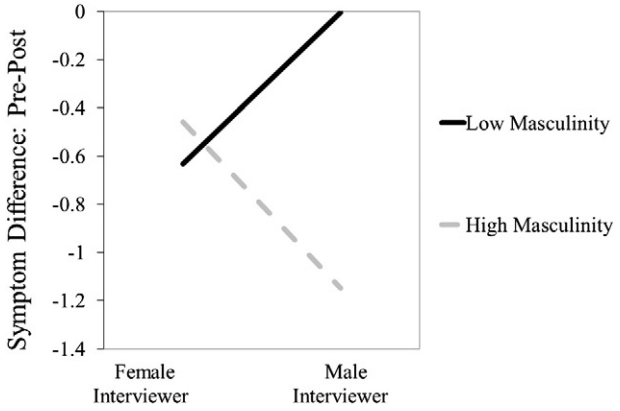

Fig. 2. Graph of interaction among symptom reporting, masculinity & physician gender. For the ease of visual depiction only, we subtracted the mean frequency of all five items in the pre-screen ($M = 1.64$, $SD = 0.63$) from the in-lab report of the five matched symptoms ($M = 1.28$, $SD = 0.57$) to derive a difference score ($M = 0.37$, $SD = 0.61$) in which positive scores indicated reporting more symptoms in the lab compared to the prescreen, negative scores indicated reporting fewer symptoms in the lab compared to the prescreen and scores of zero indicated no difference in lab versus prescreen reports of symptoms. Masculinity was a continuous measure in the repeated measures model. For ease of visual depiction we graphed masculinity scores at 2 *SD* above or below the mean for precarious manhood.

Masculinity is implicated in gender related health disparities, risk-behaviors, avoidance of healthcare (Mahalik et al., 2007; Mahalik and Lagan, 2006) and refusal to seek care (Mahalik et al., 2007; Mahalik and Lagan, 2006; Springer and Mouzon, 2011). Masculinity is associated with decreased help-seeking and providing a false sense of normativity in seeking care (Himmelstein and Sanchez, 2014; Addis and Mahalik, 2003). This study addressed a gap in the health literature by demonstrating that masculinity encouraged the withholding of health-related symptoms which is problematic given that masculinity is also associated with decreased health-promoting behaviors (Addis and Mahalik, 2003; Mahalik et al., 2007).

Prior research suggested no explicit gendered doctor preference among men (Ackerman-Ross and Sochat, 1980; Graffy, 1990; Schmittdiel et al., 2000) despite choosing males over females when given an option (Ackerman-Ross and Sochat, 1980; Graffy, 1990; Fennema et al., 1990). The present studies demonstrated that masculinity is a predictor of gender-based doctor choices in men, and that these preferences may be partially driven by the belief that men are more competent in medicine. The relationship between masculinity and biased beliefs about gendered competence should be interpreted with caution; though the results trend in the same direction, the effect may be weak given the result only marginally replicated in Study 2. Research related to gender differences in symptom reporting has explained differences via gender socialization, symptom labeling, and lack of desire to acknowledge discomfort among men (Barsky et al., 2001). This study demonstrated that masculinity interferes with symptom reporting to males in a clinical setting.

While these studies have several strengths they are not without weaknesses. First, Studies 1 and 2 are correlational in nature meaning direction of causality can be hypothesized based on theory and prior research, but not tested. A second limitation of Studies 1 and 2 was sampling using Mechanical-Turk. Studies (Buhrmester et al., 2011; Paolacci et al., 2010) suggest that demographics of participants recruited via Mechanical-Turk and other research pools are comparable. Mechanical-Turk workers, further, pay better attention to questions than college subject pools (Hauser and Schwarz, 2015). Mechanical-Turk is preferable to college samples in examining doctor choice because college students may not have chosen their doctors, particularly if they are dependent on their parents. Future studies could examine doctor-choice in community-settings by examining masculinity of patients and their choice of doctor within a given practice or health insurance program. Using a college-age sample for Study 3 limits generalizability to older men, though health habits are developed in early adolescence and adulthood (Ouellette and Wood, 1998). At the same time, this may represent a more conservative test of our hypothesis for two reasons. First, college students tend to be in peak health. Second, masculinity beliefs tend to become stronger with age (Helson and Soto, 2005; Strough et al., 2007) so the effect of masculinity on encumbered symptom disclosure to a male doctor may be stronger among older men. Using interviewers similar in age to participants may have influenced the results; it is possible that participants would be more consistent if reporting to an older individual. A final weakness of the study was using a subjective measure of comfort as rated by the interviewer. We included interviewer measures of comfort because admitting discomfort could be construed as weakness. We were concerned about reporting accuracy from participants. Interviewers were extensively trained in running the protocol and completed several mock sessions which included a comfort rating to ensure that interviewers were rating comfort using similar cues, however, we could also have collected comfort from participants. Future studies should examine masculinity in real doctor–patient settings with men of multiple age groups to see how symptom consistency may vary with age or doctor trust.

The current studies demonstrated that masculinity indirectly influences male doctor preference and masculinity encumbers doctor–patient communication in masculine men when disclosing to male doctors. Improving men's care seeking may need to involve changing care settings to be more welcoming of men, particularly if men find care settings threatening. Alternatively it may mean that doctors should take extra care in making sure patients feel at ease in discussing health issues.

Conflict of interest statement

The authors declare that there are no conflicts of interest.

Transparency document

The Transparency document associated with this article can be found in the online version.

Appendix A. Supplementary data

Supplementary data to this article can be found online at http://dx.doi.org/10.1016/j.ypmed.2015.12.008.

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