The purpose of this study was to directly compare traditional masculinity ideology, conformity to masculine norms, and gender role conflict to determine to what degree these masculinity variables are associated with self-reported risky health behaviors and negative attitudes toward seeking psychological help. Based on correlational analyses of the responses of 137 college men, higher gender role conflict was related to greater risky health behaviors, and higher levels of all three masculinity variables were related to more negative attitudes toward seeking psychological help. Using regression analyses, higher gender role conflict was a unique predictor of greater health risk behaviors, but traditional masculinity ideology was, unexpectedly, inversely associated with risky health behaviors. Conformity to masculine norms was a unique predictor of negative attitudes toward seeking psychological help. The limitations resulting from the overlap of the masculinity measures, the psychometric properties of the health risks measure, and the use of a college sample, as well as implications for practice and suggestions for future research, are discussed.

Keywords: men, traditional masculinity ideology, conformity to masculine norms, gender role conflict, health risk behaviors, attitudes toward seeking psychological help
Growing concern among healthcare professionals has brought the subject of men’s physical and mental health to the forefront of public health discussions (Addis et al., 2007; Baker, 2001; Bonhomme, 2007). It is well established that men in the industrialized world have higher rates of mortality than women. Men in the United States die an average of 5.2 years earlier than women and have higher death rates for all of the leading causes of death (Minino, Heron, Murphy, & Kocharek, 2007). Men are reported to display more antisocial behavior, sexual deviance (Gove, 1978), and substance abuse. They are diagnosed more often with conduct disorders and complete suicide four times as often as women (Centers for Disease Control [CDC], 2004). Men are also less likely to seek out mental health treatment (Addis & Mahalik, 2003), and when they do, may hold expectations which prevent their full utilization of services (Schaub & Williams, 2007).

Findings related to differences in morbidity are somewhat more complicated. An analysis of two British data sets found that the direction and magnitude of sex differences in health varied according to the particular health issue being assessed and according to the stage of the men in the life cycle (Macintyre et al., 1996; see also Wingard et al., 1989). Within the United States, infectious disease, chronic conditions, terminal diseases and unintentional injuries all have higher prevalence rates among men than women (National Center for Health Statistics, 2007). A study based on 14 years of data from the United States National Health Interview Survey suggests that differences in self-assessed health between sexes are explained by differences in the distribution between the sexes of the diagnosed chronic conditions (Case & Paxson, 2005).

The higher mortality rates (and higher morbidity rates, where they are found) may result from men engaging in more risky behaviors and having less healthy lifestyles than women. Courtenay (2000a; 2000b) reviewed the literature and concluded that males engage in over 30 controllable behaviors that increase the risk for disease, injury, and death. Men usually do not see physicians for minor symptoms and tend to wait until their medical conditions become more serious before seeing a healthcare provider (Sayer & Britt, 1996). Furthermore, this avoidance appears to extend to seeing mental health care practitioners as well (Addis & Mahalik, 2003).

Men’s higher risk for disease and death may also be related to their poorer engagement in preventive health behaviors. Men visit their physicians less often, and have fewer dental check-ups and fewer mental health visits than do women (CDC, 2004; Corney, 1990; Good, Dell, & Mintz, 1989). Men are less likely than women to have cholesterol and blood pressure levels checked, have cancer screenings, and conduct self-examinations (Bostick, Sprafka, Virnig, & Potter, 1993; Rossi, 1992). Poor dietary intake, poor sleep hygiene, lower physical activity, and poor weight management appear to be more prevalent among men (CDC, 2004; Galuska, Serdula, Pamuk, Siegal, & Byers, 1996; Kandrack, Grant, & Segall, 1999; Shi, 1998). Men are also less likely than women to utilize vitamin supplements and are less likely to comply with medical recommendations (Courtenay, 1996; Verbrugge, 1982).

Masculinity and Health Behaviors

Masculinity itself, as Harrison (1978) famously stated, may be dangerous to men’s health. From a public health perspective, it is important to investigate this possibility.
A sizeable body of research exists on the relationships between masculinity variables, health behaviors, and attitudes towards mental health treatment. In order to identify where the gaps in knowledge lie, we will first review the literature which has investigated the relationship between masculinity variables and health behaviors, and then that which has looked at the relationship between masculinity variables and attitudes toward seeking psychological help.

When studying the link between masculinity and health behaviors, researchers have used a number of measures related to the various facets of traditional masculinity. These include traditional masculinity ideology, conformity to masculine norms, gender role stress, and gender role conflict. Each has a somewhat different focus, but all are based upon the social constructionist view of masculinity which emphasizes how gender is socially and culturally (versus biologically) created and transmitted (Pleck, 1995; Smiler, 2004). Therefore, the focus in this literature is not the relationship between men’s biological sex and the health differences of interest, but rather on gender-socialized patterns of behavior and their relationship to health (Bonhomme, 2007).

**Traditional Masculinity Ideology**

The behaviors and characteristics associated with traditional masculinity form a system of social beliefs—that is, an ideology—regarding the expectations of how men “should be” (Pleck, 1995). This ideology influences how adults think, feel and behave in gender-salient matters (Levant, 1995). For example, one of the primary facets of traditional masculinity ideology is the restriction of emotions. Endorsement of this ideology would result in beliefs such as “men should never cry in public” (Levant et al., 2007). Individuals may vary in the degree to which they hold these beliefs, and therefore measures of masculinity ideology assess these differences.

In previous studies of masculinity and health behaviors, male adolescents who held more traditional masculine beliefs (based on the Male Role Attitude Scale [MRAS]) were less likely to have a physical examination (Marcell, Ford, Pleck, & Sonenstein, 2007). Men who endorsed traditional masculinity ideology have been found to report greater substance use, including tobacco (Courtenay, 1998), alcohol (Courtenay, 1998; Pleck, Sonenstein, & Ku, 1994a), and illegal drugs (Courtenay, 1998; Courtenay, McCreary, & Merighi, 2002; Pleck et al., 1994a). Moreover, those who scored higher on the MRAS were more likely to engage in high-risk sexual activity, including failing to use condoms (Courtenay, 1998; Pleck et al., 1994a). Men who endorsed traditional masculinity ideology were also found to experience higher levels of stress and anger (Courtenay et al.).

**Conformity to Masculine Norms**

Traditional masculinity ideology defines the norms or standard patterns of behavior associated with traditional masculinity (Mahalik et al., 2003). Those who endorse these norms likely conform to them. For example, a man who endorses the traditional
masculinity ideology of restrictive emotionality would likely conform to the norm of not disclosing his feelings in discussions with others (Mahalik et al., 2003).

As with masculinity ideology, a relationship has been found between conformity to masculine role norms and tobacco and alcohol use in one study (Mahalik et al., 2003). A connection between conformity and marijuana use and binge drinking was found in another (Liu & Iwanmoto, 2007). Men who scored higher on a conformity measure also were more likely to report violent behavior (Mahalik et al., 2003). Finally, responses to a measure of health risks (Health Risk Inventory) were found to be related to conformity to masculine gender roles (Mahalik, Lagan, & Morrison, 2006).

**Masculine Gender Role Stress**

It has been proposed that a man’s endorsement of traditional masculinity ideology can affect his appraisals and perceptions of events (Eisler & Skidmore, 1987). Cognitive appraisals lead to the perception of certain events as more stressful for one who endorses traditional masculinity ideology. For example, as restrictive emotionality is a central norm of traditional masculinity ideology, it is proposed that something that violates that norm, such as being seen crying, would be very stressful to a man who holds a traditional view of masculinity (Eisler & Skidmore).

Masculine gender role stress (as measured by the Masculine Gender Role Stress Scale [MGRSS]) predicted increased anger, anxiety (Eisler, Skidmore, & Ward, 1988), and hostility (Watkins et al., 1991). It has also been found to relate to type-A coronary-prone behavior and elevated blood pressure (Watkins, Eisler, Carpenter, Schechtman, & Fisher, 1991). Masculine gender role stress was also found to be associated with failing to engage in health promoting behaviors (Baffi, Redican, Sefchick, & Impara, 1991) and with risky health habits (Eisler, 1995; Eisler et al., 1988).

In a study of the relationship between scores on masculine gender role stress and blood pressure reactivity, men exposed to the cold pressor test (in which hands are submerged in ice cold water) were given either neutral instructions (in which they were told they were simply providing physiological data) or masculine challenge instructions (in which they were told that exposure of their hands in ice cold water was a measure of strength, endurance and ability to withstand pain). For men in the masculine challenge group, large differences in reactivity were found, with high-scoring MGRSS men showing higher reactivity (greater increases in blood pressure). No differences were found between men in the neutral instruction group (Lash, Eisler, & Schulman, 1990).

**Gender Role Conflict**

Gender role conflict occurs when adherence to socialized gender roles results in restricting one’s own behavior or emotions and devaluing dimensions of oneself or others such as emotionality (O’Neil, Helms, Gable, David, & Wrightsman, 1986). For example, men who endorsed traditional masculinity ideology would be less likely to communicate emotions even when they believed it may benefit them (O’Neil et al.). Overall, research has focused on the link between gender role conflict and psycholog-
ical variables. However, Blazina and Watkins (1996) found that gender-role conflict was related to an increase in reported alcohol usage.

**Multiple Measures**

Endorsement of traditional masculinity ideology, adherence to masculine role norms, gender role stress, and gender role conflict have been explored together regarding the prediction of risky health behaviors. In one study (Thompson & Pleck, 1986), greater endorsement of traditional masculinity ideology (using the Male Role Norms Scale [MRNS]) was correlated with greater alcohol consumption. Greater degrees of masculine gender role stress (using the MGRSS) was correlated with increased risk for alcohol related problems (McCreary, Newcomb, & Sadava, 1999). Significant relationships were found between masculine norm conformity (measured by the CMNI), gender-role conflict (measured by the GRCS) and aggression, as was a moderating effect of gender-role conflict on the relationship between conformity and aggression (Cohn & Zeichner, 2006). Conformity to masculine norms (using the CMNI) correlated negatively with life satisfaction, and gender role conflict (using the GRCS) correlated negatively with perception of environmental barriers to successful functioning in the community (Good et al., 2006).

**Masculinity and Attitudes toward Seeking Help**

Investigating the relationship between masculinity variables and attitudes toward seeking psychological help, studies have utilized measures of gender role conflict, conformity to masculine norms, and traditional masculinity ideology. Most commonly, the dependent measure used was the Attitudes Toward Seeking Professional Psychological Help [ATSPPH] (Fischer & Farina, 1995; Fisher & Turner, 1970).

**Gender Role Conflict**

The Gender Role Conflict Scale [GRCS] (O’Neil et al., 1986) has been used most frequently in studies of this type. It examines four specific types of conflict: the drive for success, power and competition (SPC), restrictive emotionality (RE), restrictive affectionate behavior between men (RABBM), and conflict between work and family (CBWFR). Seeking psychological help has been found to relate negatively to drive for success, power, and competition, restrictive emotionality, and restrictive affectionate behavior between men (Blazina & Watkins, 1996). Generally, regression analyses indicate that only SPC and RE predicted negative attitudes toward seeking psychological help (Blazina & Watkins; Robertson & Fitzgerald, 1992). Gender role conflict was also found to be correlated with the Barriers to Help Seeking Scale [BHSS], another measure of attitudes towards seeking psychological help (Mansfield, Addis, & Courtenay, 2005).
Other Measures

On its own, conformity to masculine norms has been found to relate to attitudes toward seeking psychological help, with higher conformity related to less positive attitudes (Mahalik et al., 2003). Combining gender role conflict and conformity, a regression model predicting attitudes toward psychological help seeking found the CMNI to be the only unique predictor between the two (Good et al., 2006).

On the other hand, gender-role conflict and traditional masculinity ideology (using the Attitudes Toward Men Scale [ATMS]; Downs & Engelson, 1982) in combination, both predicted men’s willingness to seek psychological help as measured by the Help-Seeking Attitudes and Behaviors Scale [HSABS], a measure developed for this study (Good et al., 1989). Similar correlational results were obtained examining gender-role conflict and traditional masculinity ideology as measured by the Male Role Norms Inventory [MRNI]; however, a regression analysis identified only age and one subscale of the MRNI (Rejection of Homosexuals) as unique predictors of attitudes toward seeking psychological help, with age related to more positive attitudes and the subscale related to more negative attitudes (Berger et al., 2005).

The Current Study

Based on our review of the literature it is clear that masculinity variables play important roles in men’s health behaviors and attitudes toward seeking psychological help. Overall, the literature on health behavior indicates that the endorsement of traditional masculinity ideology, conformity to masculine norms, masculine gender role stress, and gender role conflict are all associated with engagement in various risky health-related behaviors. However, there have been only a handful of studies that have directly compared the impact of various masculinity measures on a wide range of health-related behaviors. These studies have examined only a small subset of risky health-related behaviors (for example, alcohol problems and aggression), and have examined only two masculinity variables at a time.

In regard to seeking psychological help, the available literature indicates that gender role conflict, conformity to masculine norms, and the endorsement of traditional masculinity ideology have been found to be associated with men’s attitudes toward seeking psychological help. As with health behaviors, there have been only a handful of studies that have directly compared the impact of various measures of masculinity on men’s attitudes toward help-seeking, and these have examined only two masculinity variables at a time.

Given the course of prior research, it seems important to extend our knowledge by examining the relationship between various masculinity variables in combination with men’s health behaviors, as well as masculinity variables and attitudes toward seeking psychological help. We propose that the endorsement of traditional masculinity ideology is important to examine, as it is thought to be central to the social constructionist perspective on masculinity and is also proposed to influence the other variables: con-
formity, stress and conflict (Pleck, 1995). As conformity to masculinity norms has been found to relate to a number of health-risking behaviors on its own, we chose to examine conformity as one of the additional masculinity variables. Further, as gender-role conflict has consistently been found to relate to attitudes towards seeking psychological help, we chose this as the third masculinity variable to examine. Given the great number of well-validated measures of each construct, we chose to examine only these three masculinity variables—traditional masculinity ideology, conformity to masculine norms, and gender role conflict—and each with only one measure.

We expected that higher levels of each of the masculinity variables would relate to greater risky health-related behaviors. As this is the first time all three variables have been examined in relation to health risks, we did not make a specific prediction as to which combination would contribute unique predictive variance to health-risky behaviors. We expected that higher levels of each of the masculinity variables would be related to more negative attitudes toward seeking psychological help. Again, as this was the first time all three variables had been examined in relation to attitudes toward seeking psychological help, we did not make a specific prediction as to which combination would contribute unique predictive variance to seeking psychological help.

In order to measure men’s risky health-related behaviors, we used the Health Risks Questionnaire [HRQ], an instrument created by the American Psychological Association as part of their campaign to increase awareness about the connection between mental and physical health (APA, 2006). As the HRQ has not yet been validated empirically, an additional purpose of this study was to examine the psychometric properties of the HRQ.

Method

Participants

A total of 137 male students, faculty, and staff from a large, urban Midwestern university in the United States completed the survey. The average age of participants was 24.51 (SD = 9.08), and they ranged from 17 to 66 years old. Most were attending the university for their first college degree (65.7 percent). Additionally, 6.6 percent held an associate’s degree, 14.6 percent held a bachelor’s, 9.5 percent held a master’s, and .7 percent (one participant) held a doctorate; 2.9 percent of participants (4 individuals) did not respond. The majority of participants identified as Caucasian (86.1 percent), with smaller numbers indicating they were African-American (4.4 percent) or Asian-American (4.4 percent). A small number (3.6 percent) opted to write in a response, indicating Indian, Arabic or Arab-American descent. Two participants (1.5 percent) did not answer the question.

A total of 91.2 percent identified as heterosexual, 2.9 percent identified as bisexual, and 4.4 percent identified as homosexual, with two participants (1.5 percent) failing to answer. In terms of relationship status, 40.9 percent indicated they were single, 30.7 percent were seriously dating, 20.4 percent were married or partnered in a long
term relationship, 2.2 percent were divorced or separated, 5.1 percent marked other, and .7 percent did not respond. Of those who responded “other,” three chose to fill in a response, with one answering “engaged,” one indicating he had just ended a long term relationship, and one indicating “somewhere between dating and friends.”

Participants were asked to report their household income. Of those who reported (10.9 percent did not), there was a fairly even distribution in income ($0-20,000 = 14.6 percent; $20,000-40,000 = 16.1 percent; $40,000-60,000 = 15.3 percent; $60,000-80,000 = 13.9 percent; $80,000-100,000 = 13.9 percent; $100,000+ = 15.3 percent).

Procedure

Students were recruited both from a university student news service that is delivered daily via email and from psychology courses. Those recruited through the latter route were offered extra credit for their participation. Those who agreed to participate provided their email address to the researchers, who subsequently emailed participants the link to the online survey. Participants were asked to visit the link at their leisure within two weeks and were instructed to fill out the survey at a time when they would have privacy and not be distracted.

The website was constructed through a pre-existing commercial survey site (www.surveymonkey.com). Only department researchers had access to the password-protected site. The first webpage presented the informed consent. The survey was anonymous and therefore participants were asked only to answer “yes” or “no” to indicate their consent. For those who consented, demographic information was asked first, followed by the online survey which was presented in the following order: Male Role Norms Inventory-Revised (MRNI-R), Conformity to Masculine Norms Inventory (CMNI), Gender Role Conflict Scale (GRCS), Attitudes Toward Seeking Professional Psychological Help Scale (ASPPH), and Health Risk Questionnaire (HRQ).

Measures

Male Role Norms Inventory-Revised (MRNI-R; Levant et al., 2007). The revised version of the MRNI-R is a 53-item measure with items rated on a 7-point Likert-type scale (1 = strongly disagree; 7 = strongly agree), with higher scores indicating higher levels of endorsement of traditional masculinity ideology (for example, “A man should prefer watching action movies to reading romantic novels”). The total scale score is obtained by averaging of scores on all 53 items. Although there are seven subscales that assess an individual’s endorsement of different facets of traditional masculinity ideology, this study used only the total scale score. The initial validation study found adequate reliability for the total scale in a mixed gender sample (Cronbach’s α = .96) (Levant et al., 2007). In this all-male sample the total scale demonstrated high internal consistency (Cronbach’s α = .97).

In a study examining the construct validity of the MRNI-R (Williams, Smalley, Richmond, & Levant, 2007), significant inter-correlations were found with another
measure of traditional masculinity ideology, the Male Role Attitudes Scale [MRAS] (Pleck, Sonenstein, & Ku, 1994b). The same study found the MRNI-R to relate to other constructs related to masculinity, including the Conformity to Masculine Norms Inventory [CMNI] (Mahalik et al., 2003), Gender Role Conflict Scale [GRCS] (O’Neil et al., 1986) and Normative Male Alexithymia Scale [NMAS] (Levant et al., 2006).

**Conformity to Masculine Norms Inventory [CMNI]** (Mahalik et al., 2003). The CMNI assesses “the extent to which an individual male conforms or does not conform to the actions, thoughts and feelings that reflect masculinity norms in the dominant culture in U.S. society” (p. 5), using a 94-item instrument with a four-point Likert-type scale (1 = strongly disagree; 4 = strongly agree), with higher scores indicating higher levels of conformity (for example, “I never share my feelings”). Although there are 11 factor-analytically derived subscales, this study used only the total score. The CMNI Total score showed strong evidence of internal consistency (Cronbach’s $\alpha = .94$) with a test-retest reliability estimate of .95 (over a 2-3 week period) (Mahalik et al., 2003). In this sample, the total scale demonstrated high internal consistency (Cronbach’s $\alpha = .94$ for this all male sample). Mahalik et al. (2003) examined the convergent validity of the CMNI by comparing it with the Brannon Masculinity Scale [BMS] (Brannon & Juni, 1984), the Gender Role Conflict Scale [GRCS] (O’Neil et al., 1986), and the Masculine Gender Role Stress Scale [MGRS] (Eisler & Skidmore, 1987). The CMNI total score was significantly related to all three measures: the BMI ($r = .79; p < .001$), the GRCS ($r = .56; p < .001$), and the MGRS ($r = .40; p < .001$).

**Gender Role Conflict Scale [GRCS]** (O’Neil et al., 1986). The GRCS is a 37-item instrument, in which respondents use a 6-point Likert-type scale (1 = strongly disagree; 6 = strongly agree) to rate their level of agreement or disagreement with statements intended to measure instances of male gender-role conflict, with higher scores indicating higher levels of conflict (for example, “Doing well all the time is important to me”). Although there are four subscales, this study used only the total score. O’Neil et al. (1986) reported 4-week test-retest reliabilities ranging from .72 to .86, and O’Neil, Good and Holmes (1995) reported coefficient alphas ranging from .75 to .90. In this sample the total scale demonstrated high internal consistency ($\alpha = .93$ for this all male sample). Positive relationships between the GRCS subscale scores and measures of traditional masculinity ideology (Berger, Levant, McMillan, Kelleher, & Sellers, 2005), depression (Good & Mintz, 1990) and psychological distress (Good et al., 1995) provide evidence of construct validity.

**Attitudes toward Seeking Professional Psychological Help Scale [ATSPPH-Short Form]** (Fischer & Farina, 1995). The measure is comprised of 10 items asking about the respondent’s attitudes towards psychological services (for example, “A person with an emotional problem is not likely to solve it alone; he or she is likely to solve it with professional help”). Answers are recorded in a Likert-type format consisting of four alternatives: agree, partly agree, partly disagree, and disagree. “Straight” items, ex-
pressing positive help-seeking attitudes, are coded 4, 3, 2, 1; reverse scored items, expressing negative help-seeking attitudes, are coded 1, 2, 3, 4. Scores range from 10 to 40, with higher scores representing more positive attitudes toward seeking professional psychological help.

Fischer and Farina (1995) found support for the reliability and validity of this version of the ATSPPH. The correlation between the long and short versions of the scale was .87. The internal consistency reliability was sufficient in the shortened measure (Cronbach’s $\alpha = .84$), and test-test reliability was .80 after a one month interval. Factor analysis indicated that the measure consisted of one general factor. Women reported significantly more favorable attitudes than men (Fischer & Farina, 1995). In this sample the total scale demonstrated good internal consistency (Cronbach’s $\alpha = .87$).

**Health Risk Questionnaire [HRQ]** (APA, 2006). Engagement in risky health-related behaviors was measured using the HRQ. This measure features 10 “yes/no” items in which answering “no” to any of these items reflects a lifestyle choice or behavior pattern that could negatively affect health. The items include: Are you a nonsmoker?; Do you exercise for at least 20 minutes three times a week on a regular basis?; Do you eat healthy and balanced meals?; Do you practice relaxation or stress reduction methods (such as meditation or yoga) on a regular basis?; Do you sleep well most of the time and wake up fresh and rested?; Do you either drink in moderation (less than two drinks a day for men and one for women and seniors) or not at all?; Do you have ongoing, trusting relationships with friends and/or family members that remain strong even during stressful times?; Would you say that you are generally optimistic about life?; Are you engaged in activities or hobbies outside of work that bring you ongoing pleasure?; Are you able to leave your job worries at work and not take them home with you?

A scale score can be computed by assigning a value of 2 to “no” responses and 1 to a “yes” response, and taking an average of the 10 responses. Scale scores then range from 1 to 2, where a higher score indicates more risky health behaviors. This is a newer scale for which psychometric data have not yet been collected. Thus, the present study also serves as a test for the usefulness of this measure in research. For this study, the coefficient $\alpha$ was low at .53.

**Results**

Means and standard deviations for all of the measures are shown in Table 1. Respondents’ average scores were close to the midrange on all three masculinity measures. There was a slight tendency to reject traditional masculinity ideology. The respondents conformed to a moderate degree to male role norms and experienced a moderate level of gender-role conflict. Their attitudes toward seeking psychological help were positive and they reported engaging in relatively few risky health behaviors. Pearson correlations were calculated for the MRNI-R, CMNI, GRCS, and the measure of health behaviors (HRQ). The three masculinity measures were strongly correlated with one another, but their relationships with the HRQ varied. The GRCS correlated positively with the HRQ ($r = .18; p = .04$), with higher correlations indicating that as gender role conflict rose, so did reports of risky health behaviors.
Unexpectedly, neither the CMNI ($r = .09; \text{ns}$) nor the MRNI-R ($r = -.14; \text{ns}$) significantly correlated with the HRQ. As expected, the three measures of masculinity were moderately and negatively correlated with the ATSPPH, indicating that as levels of the various masculinity variables rose (for example, greater endorsement of traditional masculinity ideology), attitudes toward seeking psychological help became more negative.

**Masculinity and Health Behaviors**

Using multiple regression, all three masculinity measures were entered as predictors and the HRQ as the dependent variable. Results indicated that the masculinity variables as a group significantly predicted health-risk behaviors, accounting for 13.4 percent of variance ($R = .37; p < .001$). Beta weights of the masculinity measures were examined to determine which of the three measures contributed uniquely to the variance explained in health risk behaviors (see Table 2 for a summary). The GRCS contributed significantly to the variance in the HRQ in the positive direction ($t = 3.07; p = .003$). The MRNI-R, on the other hand, contributed significantly to the variance in the HRQ, but in the negative direction ($t = -3.97; p < .001$). This is consistent with the finding that the Pearson correlation coefficient between the MRNI-R and HRQ was in the negative direction, though the initial bivariate correlation was not significant.

### Table 2

**Regression Analysis of the Prediction of Health Risk Behaviors**

<table>
<thead>
<tr>
<th>Model</th>
<th>$B$</th>
<th>$SEB$</th>
<th>$\beta$</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMNI</td>
<td>.11</td>
<td>.08</td>
<td>.17</td>
<td></td>
</tr>
<tr>
<td>GRCS</td>
<td>.09</td>
<td>.03</td>
<td>.34*</td>
<td>.13*</td>
</tr>
<tr>
<td>MRNI-R</td>
<td>-.08</td>
<td>.02</td>
<td>-.45*</td>
<td></td>
</tr>
</tbody>
</table>

*Note. $* p < .01, two-tailed.*
Masculinity and Attitudes toward Help Seeking

We next examined whether greater endorsement of traditional masculinity ideology, conformity to masculine norms, and a higher degree of gender role conflict would be associated with more negative attitudes toward seeking psychological help as measured by the ATSPPH. A regression analysis was computed, with all three masculinity measures entered as predictors and the ATSPPH as the dependent variable. Results indicated that the masculinity variables as a group significantly predicted attitudes toward seeking psychological help, accounting for 28.6 percent of variance ($R^2 = .54$; $p < .001$). Beta weights of the masculinity measures were examined to determine which of the three measures contributed uniquely to the variance explained (see Table 3 for a summary). The CMNI contributed significantly in the negative direction ($t = -3.83$; $p < .001$), while the contributions of the MRNI-R and GRCS were non-significant.

Discussion

Masculinity and Health Behaviors

When explored using regression analyses, higher gender-role conflict was a significant predictor of greater health-risky behavior, whereas lower endorsement of traditional masculinity ideology was a significant predictor of greater health-risky behaviors, and conformity to masculine role norms was not related to risky health-related behaviors. This conflicts with prior research which found relationships between traditional masculinity ideology and risky health-related behaviors using measures other than the MRNI, such as the MRAS and MRNS (Marcell et al., 2007) and between conformity to masculine role norms and risky health-related behaviors (Mahalik et al., 2003). The present results also suggest that, given the high correlations between the three variables (.60 or greater) and therefore the high degree of overlap among these three masculinity variables (traditional masculinity ideology, conformity to masculine norms, and gender role conflict), there is something unique about gender-role conflict which predicts risky health-related behaviors. Further, there may be some-

Table 3

Regression Analysis of the Prediction of Attitudes toward Seeking Professional Psychological Help

<table>
<thead>
<tr>
<th>Model</th>
<th>B</th>
<th>SEB</th>
<th>$\beta$</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMNI</td>
<td>-.94</td>
<td>.25</td>
<td>-.41*</td>
<td></td>
</tr>
<tr>
<td>GRCS</td>
<td>-.04</td>
<td>.10</td>
<td>-.04</td>
<td></td>
</tr>
<tr>
<td>MRNI-R</td>
<td>-.08</td>
<td>.06</td>
<td>-.14</td>
<td>.29*</td>
</tr>
</tbody>
</table>

*Note.* $* p < .01$, two-tailed.
thing unique about an overall endorsement of masculinity ideology which relates to fewer risky health-related behaviors.

**Masculinity and Attitudes toward Help Seeking**

When explored using regression analyses, the three masculinity variables as a group significantly predicted attitudes toward seeking psychological help; however, only the CMNI contributed uniquely to the variance explained. This is consistent with prior research which has found a relationship between conformity to masculine norms and attitudes toward seeking psychological help. However, this conflicts with previous research which found links between more negative attitudes toward seeking psychological help and (1) gender role conflict (Blazina & Watkins, 1996; Mansfield et al., 2005; Robertson & Fitzgerald, 1992) and (2) the endorsement of traditional masculinity ideology (Berger et al., 2005; Downs & Engelson, 1982). On the other hand, when prior literature compared the relationships of gender role conflict and conformity to attitudes toward psychological help seeking, only the CMNI was found to be a unique predictor (Good et al., 2006). Again, given the overlap among the three masculinity variables (traditional masculinity ideology, conformity to masculine norms, and gender role conflict), it appears that there may be something unique about conformity to masculinity norms which is also related to negative attitudes towards seeking psychological help.

**Suggestions for Future Research**

The overlap of the three masculinity variables (traditional masculinity ideology, conformity to masculine norms, and gender role conflict) suggests that one core latent factor (traditional masculinity) contributes to a significant portion of the variance among them. Yet each scale (CMNI, GRCS, MRNI-R) related differently to the health risk measure, suggesting that something other than a common latent factor is driving the relationships (or lack of them) to health risks. To explore this further, isolating the common factor through SEM techniques and examining its relationship to health-related risk taking may begin to clarify whether or not traditional masculinity, overall, is related to differences in men’s self-reported health-related behaviors. The current sample size prohibited such analysis, but we believe this could provide insight into the mixed relationships between masculinity and health behaviors.

Given the nonsignificant bivariate correlation but significant negative beta weight between the MRNI-R and the HRQ, it is difficult to assess which of these results represent the true nature of the relationship between the constructs. Another study which used the MRNI (Levant et al., 2003) found no relationship between traditional masculinity ideology and health-related habits, which supports the nonsignificant findings in this study. However, that study (a survey of Russian college men) may have had problems with both the sample and the health habits measure. It is possible that the MRNI and the MRNI-R do not tap into dimensions of traditional masculinity that are
strongly related to risky health behaviors or poor health-related habits. It is also possible that there may be something specific to the MRNI which is associated with less risky health-related behaviors. One way to assess this latter possibility would be to investigate whether the MRNI-R and the MRAS have opposite relationships with risky health-related behaviors.

The negative relationship may also lend support to studies which suggest that not all aspects of traditional masculinity ideology are inherently unhealthy, but that some may serve a protective function. Researchers examining the relationship between masculine gender-role conflict and rehabilitation for spinal cord injuries found a positive association between restrictive emotionality and recovery (Schopp, Good, Mazurek, Barker, & Stucky, 2007). The authors suggested that in an intensive physical rehabilitation situation, perhaps the tendency to avoid emotional issues may allow for problem-focused (vs. emotion-focused) coping, which could facilitate rehabilitation compliance.

Previous research has demonstrated a link between the CMNI (and its various subscales) and abuse of substance including tobacco, marijuana, and alcohol (Liu & Iwamoto, 2007; Mahalik et al., 2003), as well as risky health behaviors (Mahalik et al., 2006). While the current data do not support the link with the total scale score on the CMNI, an *ex post facto* analysis of the subscales indicated a relationship between health risks and the CMNI’s emotional control \((r = .24; p = .005)\) and self-reliance \((r = .18; p = .04)\) subscales. However, given the size of these correlations and the large number of relationships examined, such findings should be viewed with caution. We would recommend additional studies to continue examining the relationship between conformity to masculine norms and health-risk behaviors, providing additional clarification as to the specific facets which may be related to risky health-related behaviors.

Future investigations should use a measure of risky health-related behaviors that has stronger psychometric support. One contribution of the present study is that it provided a field test for the HRQ; however, results suggest the HRQ may not be an adequate measure for research. The measure did not have previous validity or reliability evidence, and with the present sample the HRQ displayed less than desirable reliability \((\alpha = .53)\). Other potential problems with the HRQ are that it is short (10 items) and uses “yes/no” responses rather than a traditional Likert-type scale. A more desirable measure may be the 21-item health risk measure used by Courtenay et al. (2002).

Our data also continue to support earlier conclusions which suggest that the CMNI measures factors related to the willingness to seek psychological help (Mahalik et al., 2003). In this sample, again through an *ex post facto* analysis, we found that only two of the 11 subscales (Status and Work Primacy) failed to correlate with the ATSPPH, echoing the previous results (Mahalik et al., 2003). The other measures of masculinity also held significant relationships with the ATSPPH, with greater masculinity correlating with more negative attitudes. Previously, the Success, Power and Competition, and the Restricted Emotionality subscales of the GRCS had been found to relate to negative attitudes towards seeking psychological help (Blazina & Watkins, 1996; Robertson & Fitzgerald, 1992). *Ex post facto* analyses found similar results in our sample, although the Restricted Affectionate Behavior Between Men subscale was also sig-
nificantly related to the ATSPPH \( (r = -0.36; \ p < 0.001) \). For the MRNI-R, *ex post facto* analysis indicated that all subscales were related to the ATSPPH. Of particular interest is the strongest bivariate correlation, that between the ATSPPH and the Restrictive Emotionality subscale \( (r = -0.46; \ p < 0.001) \). Again, the large number of analyses means such relationships should be interpreted cautiously. We suggest that in the future, researchers should selectively propose relationships between various subscales of the traditional masculinity measures and attitudes towards seeking professional psychological help. Subscales which are directly relevant to psychotherapy, such as the various measures of restrictive emotionality, make ideal candidates, given their theoretical relevance and initial statistical findings.

Finally, future research should incorporate contextual variables when studying the intersection of gender and health-related behaviors. Initial analyses in this study failed to find differences in either risky health-related behaviors or willingness to seek psychological help by reported income. However, Levant et al. (2003) noted that socio-economic status (SES) was a significant contextual predictor for engagement in risky health-related behaviors among Russian men, and Berger et al. (2005) found that age was a significant contextual predictor of positive attitudes toward help seeking. Future research should also use more diverse samples. College students, predominantly white and middle class, tend to be younger and to experience themselves as invulnerable; hence, health issues simply may not be salient to them. In addition, for college students the participation in risky behavior may be related to factors other than the variables of interest in the present study (for example, different norms for drinking behavior).

### Implications for Practice

The overall implications of our findings for practice are that while traditional masculinity may stand as a barrier to psychological help seeking, its relationship to risky health-related habits is not as clear. Given the negative relationship between traditional masculinity (particularly gender-role conflict) and positive attitudes towards mental health treatment, it is important to consider what the field may do to reduce this barrier. Investigators in one study found that among men scoring high on gender role conflict, those who viewed a 10-minute video of a cognitive-focused counseling session were more likely to seek psychological help than men who viewed a 10-minute video of an emotion-focused counseling session (Wisch, Mahalik, Hayes, & Nutt, 1995). This suggests that exposure to different kinds of mental health treatment may affect willingness to seek psychological help. Another study showed that the Success, Power and Competition subscale of the GRCS was positively related to help seeking ratings from some types of helpers (internet, mothers) but negatively related to seeking help from others (a male friend) (Lane & Addis, 2005). This suggests that the source of help may affect attitudes. Attention to these issues in creating outreach for accessing mental health services might increase the likelihood of men seeking out or agreeing to participate in mental health treatment.
References


Baker, P. (2001). The international men’s health movement has grown to the stage that it can start to influence international bodies. *British Medical Journal, 323*, 1014-1015.


Relationships Between Masculinity Variables


