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Abstract

Evidence suggests that men who strongly endorse masculine traits display an atypical presentation of depression, including more externalizing symptoms (e.g., anger or substance use), but fewer typical, internalizing symptoms (e.g., depressed mood or crying). This phenomenon has not been adequately explored in older adults or women. The current study used the externalizing subscale of the Masculine Depression Scale in older and younger men and women to detect atypical symptoms. It was predicted that individuals who more strongly endorsed masculine traits would have higher scores on the measure of externalizing symptoms relative to a measure of typical depressive symptoms Center for Epidemiologic Studies–Depression Scale. It was anticipated that results would differ by age-group but not by gender. Multigroup path analysis was used to test the hypothesis. The hypothesized path model, in which endorsement of masculine traits was associated with lower scores on the Center for Epidemiologic Studies–Depression Scale and with scores on the externalizing, but not internalizing, factor of the Masculine Depression Scale, fit the data well. Results differed significantly by age-group and gender. Masculine individuals reported lower levels of typical depressive symptoms relative to externalizing symptoms, but further research is needed within age- and gender groups. Results are consistent with the gendered responding framework and suggest that current assessment tools, which tend to focus on internalizing symptoms of depression, may not detect depression in individuals who endorse masculine traits.

Keywords

depression, mental health, aging, masculinity, gendered responding

The prevalence of major depressive disorder is higher in women than in men across the world (Seedat et al., 2009). This difference begins to develop in adolescence and continues into young adulthood (Essau, Lewinsohn, Seeley, & Sasagawa, 2010). Among older people, multinational and representative studies of depressive symptom prevalence report higher rates in older women than older men (Chou & Cheung, 2013; Zunzunegui et al., 2007). A range of explanations, including biological differences, social inequality, measurement issues, and psychological differences, such as women's more frequent and intense rumination, have been proposed to explain this finding (McBride & Bagby, 2006; Nolen-Hoeksema, 2012; Salokangas, Vaahtera, Pacriev, Sohlman, & Lehtinen, 2002). Researchers continue to present data supporting different and sometimes contradictory explanations for this gender difference. The purpose of the current study is to examine one explanation for gender differences in depression symptoms, the “gendered responding” framework (Addis, 2008, p. 160). According to this framework, men and women differ in their expression, experience,

and response to negative affect, which leads to a different manifestation of depression by gender (Addis, 2008; Winkler et al., 2004).

Gendered Responding and Masculine Depression

Empirical investigations conducted in the United States and Western Europe have established that men, compared to women, tend to engage in different behaviors in response to feeling upset or when faced with negative life

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events (Mahalik & Rochlen, 2006; Nolen-Hoeksema, 2012). Researchers hypothesize that masculine roles are the result of social learning: boys and men observe others and are rewarded or punished for certain ways of reacting to life events (Addis & Cohane, 2005; Levant, 1996). Specifically, men, compared to women, are less likely to endorse crying (Salokangas et al., 2002; van Noorden et al., 2010) and more likely to endorse substance use, somatic problems, and anger in association with affective illness or when asked about depressive symptoms (Kessing, 2006; Möller-Leimkühler, Bottlender, Strauß, & Rutz, 2004; Roeloffs, Fink, Unützer, Tang, & Wells, 2001; van Noorden et al., 2010).

The gendered responding framework suggests that individuals who endorse a masculine gender role are relatively more likely to display externalizing symptoms (e.g., anger, somatic symptoms, substance use) and less likely to report typical depressive symptoms (e.g., depressed mood or crying) in response to negative life events (Addis, 2008; Rodgers et al., 2014). As a consequence, men may not represent their symptoms in a way that is captured by current diagnostic rubrics and measures, whereas women's typical endorsement of symptoms and behavior matches better with current diagnostic criteria (Nolen-Hoeksema, 2012).

Addis's (2008) conceptualization of gendered responding emphasizes that masculine depression is not simply a variant of depression that happens to be prevalent in men but part of a larger pattern of gendered responses to life events. In addition to externalizing symptoms, gendered responding is thought to include symptoms related to gender role strain (i.e., feeling that one is not living up to what it means to be a man), leading to disappointment, shame, increased conflict, withdrawal, restricted emotionality, and increased need for control (Chuick et al., 2009; Jensen, Munk, & Madsen, 2010). These may be conceptualized as the *internalizing aspects of masculine depression* or as an additional product of gendered responding.

Recent controversy emphasizes the difficulty of representing the complicated and multilayered nature of "masculinity" with self-report measures (Thompson & Bennett, 2015). Results of research on the relations between constructs related to masculinity and typical depressive symptoms are mixed, likely due to different ways of measuring masculinity. Gender role conflict has been identified as a consistent risk factor for typical depressive symptoms and other negative psychological outcomes (O'Neil, 2008). Hegemonic masculinity was reported to be positively associated with typical depressive symptoms in men (Syzdek & Addis, 2010), but Magovcevic and Addis (2008) reported no relation. Masculine traits, such as those included on the Bem Sex Role Inventory, were associated with fewer depressive

symptoms in young women but were unrelated in young men (Lengua & Stormshak, 2000). One implication is that these masculine or instrumental traits may actually be protective against typical depression for some individuals.

There has been "more rhetoric than research" concerning gendered responding and the existence of symptoms specific to men or those who endorse traditional masculine traits (Nolen-Hoeksema, 2012, p. 178). Previous research has consisted of preliminary tests of the gendered responding framework in young to middle-aged men. It is unknown whether age differences exist in the relation between endorsement of masculine traits and masculine depression symptoms. Aging is also an important contextual variable in the interaction of masculinity and psychopathology, as illustrated by the fact that older men are most at risk for death by suicide. The absence of emphasis on age in previous investigations is a significant oversight.

Measuring Masculine Depression

To improve on an earlier measure of masculine depression (i.e., the Gotland Scale for Masculine Depression; Rihmer, Rutz, & Pihlgren, 1995), Magovcevic and Addis (2008) developed the Masculine Depression Scale (MDS) to assess symptoms thought to be common in men: anger, irritability, somatic symptoms, using substances or sex to feel better, and internalizing symptoms related to gender role strain. In their initial study, men age 18 to 65 years who reported high levels of adherence to traditional masculine norms scored higher on the externalizing factor on the MDS than on a widely used measure of typical depressive symptoms, the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). Although promising, there is limited published research using the MDS. The current study will use this measure to examine gendered responding in older adults and women.

Applying Gendered Responding to Older Adults

Older adults have received little attention in the context of the gendered responding framework and masculine depression. Calasanti (2004) pointed out that older men have never been systematically omitted from psychological research, but they have often not been examined "as men," that is, in relation to their specific gender identity or role (p. S307). Because adherence to traditional masculine and feminine traits is a reflection of social learning taking place during specific cultural and historical events, age and the developmental history are important components to consider (Strough, Leszczynski, Neely, Flinn, & Margrett, 2007). Results from younger adults cannot be

generalized to older adults, who differ in both age and cohort.

With the exception of Jensen et al. (2010), who provided qualitative support for gendered responding through interviews with older men who had been depressed, there have been few publications relevant to older adults. Systematic interviews with clinicians and clinical researchers have suggested that depressed older men deny experiencing depressive or psychological symptoms but endorse sleep, cognitive, and pain symptoms and are therefore difficult to diagnose or refer to appropriate psychological treatment (Hinton, Zweifach, Oishi, Tang, & Unuetzer, 2006). Research using self-report measures of typical and externalizing symptoms of depression would corroborate these qualitative results.

An exploration of the phenomenon of gendered responding and depression is especially important in older men, who have high rates of suicide (Centers for Disease Control and Prevention, 2013; Conwell, Van Orden, & Caine, 2011). Maladaptive coping and externalizing symptoms may provide a link between depression and high rates of suicide in men (Chuick et al., 2009; Joiner, 2011). If important aspects of masculinity are threatened by aging (e.g., physical strength or a powerful work role), older men may be less likely to seek help for or express typical depressive symptoms in order to conserve a masculine identity (Calasanti, 2004).

It is unknown if there are age differences in gendered responding or masculine depression. Older adults are stereotyped as more conventional and traditional in their gender roles. Nevertheless, older men have been identified as more androgynous (Strough et al., 2007), report more positive attitudes toward seeking professional psychological help (Berger, Levant, McMillan, Kelleher, & Sellers, 2005), and report less gender role conflict than younger men (O'Neil, 2008).

Applying Gendered Responding to Women

Although women report more depressive symptoms than men across the board, detecting certain externalizing symptoms may be important for identifying both men and women who are in need of treatment if they endorse masculine traits and do not report typical symptoms (Möller-Leimkühler, & Yücel, 2010). Women are often omitted from research on masculine depression or gendered responding, leading to an incomplete understanding of the role of gender differences versus endorsement of masculine traits. Magovcevic and Addis (2008) specifically suggested that examining masculine depression symptoms in women would be helpful to elucidating the construct, and thus they have been included in this study.

Current Study

The current study tested an aspect of the gendered responding framework, which refers to the predicted relation between masculine traits and depressive symptoms, as measured by the MDS and a measure of typical depressive symptoms. The current study is designed as an extension of Magovcevic and Addis (2008) to older adults and women. Similar to Magovcevic and Addis, the internalizing and externalizing factors of the MDS were examined separately. Multigroup path analyses were used to model the relations between endorsement of masculine traits, masculine depression symptoms (MDS-externalizing and MDS-internalizing), and typical symptoms of depression across age and gender. The hypothesis was that endorsement of masculine traits would be associated with lower levels of typical depressive symptoms compared to externalizing masculine depression symptoms (Hypothesis 1). It was predicted that endorsement of masculine traits would *not* be related to internalizing masculine depression symptoms, relative to typical depressive symptoms. Given the importance of developmental history and social context in the development of masculine traits, it was hypothesized that the relation between masculine traits, typical depression, and masculine depression would vary across age-groups (Hypothesis 2). Due to the limited research in aging, masculinity, and depression, this hypothesis is exploratory and nondirectional.

Method

Participants

One hundred and seven community-dwelling older adults age 60 years and older and 498 undergraduate students aged 18 to 30 years completed questionnaires. Descriptive statistics are displayed in Table 1 by age-group and gender. The two groups differed by education, $\chi^2 = 74.92$, $p < .001$; marital status, $\chi^2 = 397.78$, $p < .001$; and occupational status, $\chi^2 = 489.11$, $p < .001$; as would be expected by their age differences and sampling method.

Procedure

Recruitment of older adults took place at senior centers, an assisted living facility, and community health fairs in the Appalachian region of the United States. Potential participants were approached once and asked if they would like to take part in a survey on mood and behavior. Potential participants were also provided with single-page cover letter containing the major goals of the study and information about data security and anonymity. Older adults completed the questionnaire in a paper format. If an older adult was not able or did not choose to finish the

Table 1. Participant Characteristics.

Variable	Younger adults			Older adults		
	Total	Men	Women	Total	Men	Women
N	474	117	356	105	36	67
Age, M (SD)	20.01 (1.89)	20.71 (2.39)	19.78 (1.63)	73.62 (8.56)	72.69 (7.12)	74.12 (8.99)
Caucasian (%)	91.14	88.98	91.85	93.07	91.43	93.94
Female (%)	75.11			65.05		
Marital status (%)						
Single	93.46	95.76	92.70	5.77	8.33	4.55
Married/partnered	6.12	4.24	6.74	50.96	63.89	43.94
Divorced/widowed	0.42	0	0.56	43.27	27.78	51.52
Occupation (%)						
Working	15.19	16.95	14.61	7.37	10.00	6.35
Student	83.76	81.36	84.55	0	0	0
Not working	1.05	1.69	0.84	92.63	90.00	93.65
Education (%)						
High school/GED	10.99	10.17	11.27	42.00	28.13	46.97
Some college	80.76	80.51	80.85	23.00	34.38	18.18
College degree	6.13	7.63	5.63	26.00	28.13	25.76
Other	2.11	1.69	2.25	9.00	9.38	9.09

Note. Ns for variables vary slightly because of missing data.

survey when researchers were present, he or she was provided them with a stamped envelope in which to return the survey. Older adults received \$5 at the time they agreed to participate in the study.

Recruitment of young adult subjects took place in undergraduate psychology classes at a large public university in the same region. Young adults completed the same items as older adults but completed the questionnaire online, outside of the classroom, and received extra credit in their class as an incentive to participate. The procedures were approved by the university's institutional review board.

Measures

Bem Sex Role Inventory. Endorsement of masculine traits was measured using the Bem Sex Role Inventory (BSRI-M; Bem, 1974). Items are words or phrases that describe an individual's typical behavior (e.g., "dominant," "analytical"; Bem, 1974, p. 156) and are scored from 1 (*never or almost never true*) to 7 (*almost always or always true*). Only the 20-item masculinity subscale (BSRI-M) was used. The original psychometric evaluation revealed good internal consistency, Cronbach's $\alpha = .86$, and test-retest reliability after 4 weeks, $r = .90$ for the masculinity subscale (Bem, 1974). The masculinity subscale of the BSRI has demonstrated convergent validity with the Personal Attributes Questionnaire masculinity scale (Lippa, 1991). In the current study, internal consistency for the BSRI-M was good, Cronbach's $\alpha = .89$ for older and Cronbach's $\alpha = .88$ for younger adults.

The Center for Epidemiologic Studies–Depression Scale. The Center for Epidemiologic Studies–Depression Scale (CES-D) is a 20-item self-report inventory of typical depressive symptoms (e.g., "I felt that everything I did was an effort" and "I enjoyed life," which is reverse-scored; Radloff, 1977, p. 387). Participants indicate their experience of these symptoms in the past week on a 4-point scale from *rarely or not at all* to *most of the time*. Researchers have noted that the CES-D is acceptable for use with older adults because scores are not overly influenced by physical illness (Gatz, Johansson, Pederesen, & Berg, 1993). For the current study, Cronbach's α for the CES-D was good, .85 in older adults and .90 in younger adults. These numbers are consistent with previous research using adults and older adults (Gatz et al., 1993; Radloff, 1977).

Masculine Depression Scale. The MDS is a 44-item scale that measures depressive symptoms thought to be more relevant for individuals who adhere to a masculine gender role (Magovcevic & Addis, 2008). Participants are instructed to think about how their behavior has changed in the past month and rate each symptom from 1 (*none or a little of the time*) to 4 (*all of the time*).

Psychometric Properties Reported by Magovcevic and Addis. In Magovcevic and Addis's (2008) original study, two factors, internalizing (33 items) and externalizing (11 items), were supported by a factor analysis. MDS-externalizing was moderately correlated with

Table 2. Means and Standard Deviations for Study Variables.

Variable	Possible range	Younger adults			Older adults		
		N	Men	Women	N	Men	Women
CES-D	0-60	472	15.66 (10.43)	16.05 (9.72)	101	11.38 (8.46)	12.58 (8.62)
MDS	44-176	465	72.28 (18.85)	71.31 (19.48)	97	58.14 (11.67)	62.62 (17.84)
MDS-Internalizing	33-132	463	53.76 (15.24)	54.01 (16.44)	94	44.55 (9.80)	49.00 (15.91)
MDS-Externalizing	11-44	464	18.51 (4.83) ^a	17.30 (4.27)	96	13.75 (2.72)	13.51 (2.53)
BSRI-M	20-140	462	96.99 (14.51) ^a	93.20 (14.78)	94	105.81 (16.41)	98.46 (18.60)

Note. CES-D = Center for Epidemiologic Studies–Depression Scale; MDS = Masculine Depression Scale; MDS-Internalizing = Masculine Depression Scale–Internalizing factor; MDS-Externalizing = Masculine Depression Scale–Externalizing factor; BSRI-M = Bem Gender Role Inventory–Masculinity subscale. Statistics are *M* (*SD*) unless otherwise noted. *N*s for scales vary slightly because of missing data. Two older adults did not indicate their gender and are not included in this table.

^aSignificant gender difference, within age-group.

MDS-internalizing ($r = .40$), indicating “related but distinct” clusters of symptoms (p. 124). Internal consistency was high for the full scale ($\alpha = .95$) and acceptable for MDS-externalizing ($\alpha = .77$).

MDS-internalizing factor. The MDS-internalizing factor measures cognitive and emotional symptoms thought to be to be more relevant for individuals who adhere to a masculine gender role. Internal consistency for the MDS-internalizing factor was .96. Convergent and construct validity was suggested by large correlations with the BDI ($r = .80$) but a low correlation with the Conformity to Masculine Norms Inventory (CMNI; $r = .15$). These results indicate that the internalizing factor is similar to typical depressive symptoms and that it is not highly related to adherence to masculine norms.

MDS-externalizing factor. The MDS-externalizing factor measures behavioral symptoms thought to be more common in men with depression (e.g., “I’ve yelled at people or things”; Magovcevic & Addis, 2008, p. 125). Scores on the MDS-externalizing scale were moderately correlated with the BDI, $r = .48$; the Gotland Scale for Masculine Depression, $r = .46$; and the CMNI, $r = .48$. This suggests that MDS-externalizing overlaps less with typical depressive symptoms and is more highly related to adherence to masculine norms.

Psychometric Properties in the Present Study. In the present study, the externalizing and internalizing factors of the MDS were analyzed separately. Internal consistency for the full MDS was $\alpha = .95$ for both younger and older adults. Internal consistency of the internalizing factor also was .95 for both age-groups. For the externalizing factor, internal consistency was lower than expected in older adults, $\alpha = .64$ and acceptable in younger adults, $\alpha = .77$.

Missing Data

The data were carefully examined and participants were excluded if their data evidenced clearly careless responding (e.g., apparent inattention to reverse-scored items or idiosyncratic patterns such as alternating between the first and second answer choices for the entire survey; $n = 18$). In addition, five participants were excluded because they were outside the age criteria for inclusion in either the young adult (over age 30 years, $n = 4$) or older adult (under age 60 years, $n = 1$) groups, resulting in a sample size of 474 younger adults and 105 older adults. If a participant had provided at least 90% of the responses for an individual scale, total scores were prorated and used in relevant analyses. Cases were deleted from the primary analyses if more than 10% of the participant’s responses on relevant measures were missing. The resulting sample size for testing hypotheses was 472 younger adults and 86 older adults.

Results

Analyses were completed using SAS 9.3 and AMOS 21. Descriptive statistics for study variables by age-group and gender are presented in Table 2. Younger adults reported significantly more typical depressive symptomatology than older adults, as measured by the CES-D, $t(1, 573) = 4.06, p < .001$. Compared to older adults, younger adults scored higher on the full MDS, $t(1, 566) = 5.26, p < .001$, as well as the externalizing, $t(1, 567) = 8.42, p < .001$, and the internalizing factors, $t(1, 565) = 4.02, p < .001$. The only significant gender differences appeared in younger adults. Young men had significantly higher scores on MDS-externalizing, $t(1, 471) = -2.57, p = .010$, and on the BSRI-M, $t(1, 471) = -2.44, p = .015$, than young women. On the BSRI-M, older adults had higher scores than younger adults, $t(1, 568) = -3.88, p = < .001$. Mean BSRI-M scores were normally distributed across male and female participants.

Table 3. Intercorrelations Among Study Variables.

Measure	Younger adults					Older adults				
	1	2	3	4	5	1	2	3	4	5
1. CES-D	—	.80*	.81*	.52*	-.19*	—	.77*	.76*	.58*	-.28*
2. MDS	.83*	—	.99*	.77*	-.17*	.75*	-	.99*	.75*	-.30*
3. MDS-internalizing	.84*	.98*	—	.65*	.19*	.76*	.98*	—	.68*	-.32
4. MDS-externalizing	.61*	.82*	.70*	—	-.03	.61*	.78*	.66*	—	-.13
5. BSRI-M	-.24*	-.17	-.19	-.05	—	-.29	-.30	-.30	-.31	—

Note. CES-D = Center for Epidemiologic Studies–Depression Scale; MDS = Masculine Depression Scale; MDS-Internalizing = Masculine Depression Scale–internalizing factor; MDS-externalizing = Masculine Depression Scale–Externalizing factor; BSRI-M = Bem Sex Role Inventory–Masculinity subscale. Intercorrelations for younger women (*n* = 356) and for older women (*n* = 67) are presented above the diagonal; intercorrelations for younger men (*n* = 117) and older men (*n* = 36) are presented below the diagonal. *N*s for each correlation vary slightly due to missing data.
**p* < .01.

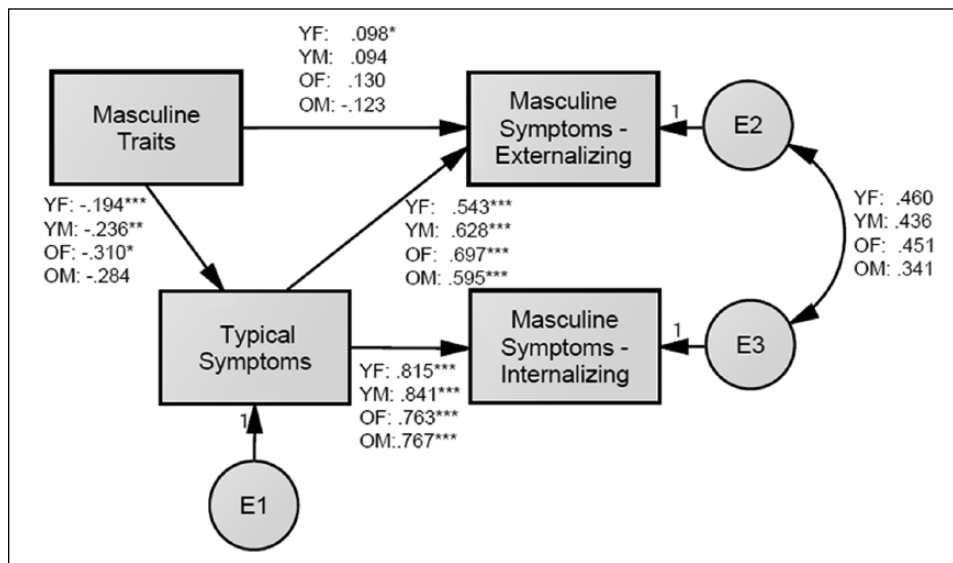


Figure 1. Path analysis testing the hypothesis that individuals with greater endorsement of masculine traits would report more externalizing masculine depressive symptoms, relative to their report of typical depressive symptoms.
Note. YF = younger adult female; YM = younger adult male; OF = older adult female; OM = older adult male. Standardized path coefficients are displayed by group.

Pearson’s product–moment correlational analyses were conducted for the primary study variables and are presented in Table 3 by age-group and gender. The construct validity of the MDS was supported by a strong correlation with the CES-D. Furthermore, the two subscales of the MDS (internalizing and externalizing) were strongly associated with each other, the total MDS, and the CES-D. As expected, the MDS-externalizing scale was less strongly correlated with the CES-D compared to the MDS-internalizing scale. In both age-groups, higher scores on the BSRI-M were associated with lower endorsement of depressive symptoms on both the CES-D and the total MDS. Contrary to expectations, the association between the BSRI-M scale and the externalizing

factor of the MDS was weak. Correlations were similar across men and women.

A path analysis was conducted (see Figure 1) to test Hypothesis 1, that individuals with higher scores on the BSRI-M scale would have lower scores on the CES-D relative to their scores on the externalizing factor of the MDS. A path from BSRI-M to MDS-internalizing scale was not specified as a significant relation was not anticipated independent of the association with CES-D. Maximum likelihood estimation was used. Model fit was assessed using the normed fit index (NFI), the comparative fit index (CFI), and the root mean square error of approximation (RMSEA). Acceptable values are >.90 for the NFI and CFI, and <.09 for RMSEA (Tabachnick &

Fidell, 2013). In addition, the Akaike information criterion (AIC) statistic was used as an indicator of relative model fit. Among nested models, the lower AIC statistic represents the best model fit.

In the baseline four-group (younger women, $n = 355$; younger men, $n = 117$; older women, $n = 52$; older men, $n = 34$) model, all parameters were allowed to vary freely across each of the four groups. The baseline path model, in which endorsement of masculine traits was associated with (lower) scores on the CES-D and with scores on the externalizing, but not internalizing, factor of the MDS, fit the data well, $\chi^2 = 2.399$, 4 degrees of freedom (df), *n.s.*, NFI = .998, CFI = 1.000, RMSEA = .000, AIC = 74.399.

Next, to test Hypothesis 2, a series of multigroup model tests was conducted in order to evaluate whether the pattern of relations between masculine traits, masculine depressive symptoms, and typical depressive symptoms would differ by age-group (18-30 vs. 60+). There were no grounds for anticipating differences across gender. A model was fit in which parameters were constrained to be equal across age-group, followed by a model in which parameters were constrained to be equal across gender. Because these reduced models were nested in the baseline model, the relative fit was assessed by calculating the change in chi-square statistic from the baseline model. Significant change in chi-square indicates loss of model fit associated with the constraints imposed in the reduced model.

As anticipated, the model in which parameters were constrained to be equal for younger and older groups resulted in a significant loss of fit compared to the baseline model, $\Delta\chi^2 = 60.889$, 18 df , $p < .001$, AIC = 99.288. Contrary to expectations, the model in which parameters were constrained to be equal for men and women also resulted in significant loss of fit compared to the baseline model, $\Delta\chi^2 = 33.541$, 18 df , $p < .05$, AIC = 71.940. Thus, the baseline model represents the best fit to the data.

The standardized path coefficients for each of the four groups in the baseline model are depicted in Figure 1. The internalizing and externalizing factors of the MDS were correlated, but the CES-D was more strongly related to the internalizing than externalizing factor, supporting the construct validity of the MDS. Masculine traits were inversely related to CES-D scores in all four groups, although the path coefficient was not significant in the older male group ($p = .085$), likely due to the smaller sample size in this group. Masculine traits were positively related to MDS-externalizing scores for each of the groups except the older men, although the path coefficient was only significant for the younger women group, likely due to sample size.

Discussion

The current study sought to examine masculine depression and the gendered responding framework among

older and younger men and women. A path model was constructed to test the prediction that individuals with greater endorsement of masculine traits would endorse fewer typical or internalizing symptoms of depression (e.g., sad mood, crying, numbness) relative to externalizing symptoms of depression (e.g., anger, somatic symptoms, substance use). This path model provided a strong fit for the data, lending further empirical support for the gendered responding framework, as well as the construct of "masculine depression." There was a weak relation between masculine traits and externalizing symptoms and a negative relation between masculine traits and typical symptoms. These results suggest that the endorsement of masculine traits is associated with inhibited reporting of typical symptoms of depression relative to the reporting of atypical, externalizing symptoms.

Whereas prior studies have examined the gendered responding framework among younger and middle-aged men, the current study sought to extend these findings to women and older adults. It was anticipated that individuals who endorsed more masculine traits would endorse lower levels of typical depressive symptoms relative to externalizing depressive symptoms. Although age differences were anticipated, it was expected that results would be similar for men and women. Contrary to expectation, however, results from a series of multigroup model tests demonstrated that the best fitting version of our model was one in which neither age-group (old vs. young) nor gender (men vs. women) was constrained to be equal. Thus, the current findings suggest that the relations between masculine traits and endorsement of typical versus externalizing depressive symptoms vary as a function of both age and gender.

The extension of the study of masculine depression to women echoes Bem's (1974) original assertion that all individuals embody feminine and masculine characteristics. Although men may be more likely to endorse masculine traits, women may also endorse these traits. By examining masculine traits in both men and women, we can explore whether differences in depression are related to sex (being male or female) or to relative endorsement of masculine traits. Women who endorsed more masculine traits reported lower levels of typical depressive symptoms and relatively higher levels of externalizing symptoms, a pattern that was better defined in women of both age-groups than in men in the current study.

It is important to note that firm conclusions cannot be drawn from the current study regarding age and gender differences and the gendered responding framework due to the small size of the older age-group (i.e., 34 older men and 52 older women). It is possible that only the magnitude of these relations differs across gender and age-groups (e.g., the relation between masculinity and externalizing depressive symptoms is less strong among

older men versus younger men). It *can* be concluded that gender and age differences in the gendered responding framework likely exist and certainly warrant further empirical investigation.

To our knowledge, this study is the first investigation of the MDS among older men and women. Results indicated that, regardless of age or gender, the CES-D, a measure of typical depressive symptoms, was more strongly correlated with the internalizing subscale of the MDS compared to the externalizing subscale of the MDS, supporting the construct validity of those two subscales. The current findings lend support to those of Magovcevic and Addis (2008), who indicated that the externalizing items on the MDS are the unique addition to the field. These externalizing symptoms are not captured by measures of typical depression or diagnostic criteria for depressive disorders. The MDS may provide additional clinical information in women in addition to men. The finding that masculine traits are associated with lower levels of typical depressive symptoms partially corroborates previous qualitative and theoretical work (Chuck et al., 2009; Jensen et al., 2010; Rochlen et al., 2010).

Magovcevic and Addis (2008) reported that two measures of hegemonic masculinity were moderately and positively associated with greater scores on several measures of depressive symptoms, including the externalizing subscale of the MDS. The current results represent a divergence from this finding. Instead, masculine traits, as measured by the BSRI-Masculinity subscale, were associated with lower scores on measures of depressive symptoms. Items on the BSRI are mostly positive in valence, which contrasts with the measures of masculinity used by Magovcevic and Addis (see below) and may be the reason for this difference. Nevertheless, results were similar in that the masculinity construct predicted lower levels of traditional symptoms relative to externalizing symptoms.

The present study suggests that young adult students report high levels of both typical and externalizing depressive symptoms (Möller-Leimkühler & Yücel, 2010). The mean CES-D score for young adults was above the suggested clinical cutoff of 16 (Radloff, 1977). The young adults' mean scores on the MDS subscales in the current study are roughly similar to those reported by Magovcevic and Addis (2008), even though Magovcevic and Addis targeted participants who had recently experienced a stressful life event. Younger adults scored significantly higher on the MDS externalizing subscale than older adults, so those symptoms may be especially prominent in young adults or college students. Older adult women had higher mean scores on the full MDS than men, and scores on the MDS externalizing subscale were similar between older men and women, but lower than the validation sample (Magovcevic & Addis, 2008). As other researchers have reported, women are more likely

than men to report symptoms of masculine depression, just as they are at higher risk of traditional depressive symptoms (Möller-Leimkühler et al., 2004; Möller-Leimkühler & Yücel, 2010). The utility of identifying and inquiring about symptoms of masculine depression lies not in the fact that masculine individuals experience them at higher levels but in the fact that men or individuals who endorse high masculinity may display those symptoms in lieu of typical symptoms of depression.

Limitations

The results of this study should be considered in light of several limitations. The current study used a cross-sectional design with two age-groups, which does not allow for conclusions about changes over the life span or for middle-aged adults. Most of the participants identified as White, which reflected the geographic region where the data collection took place (Appalachia). The current results may not generalize to other racial or ethnic groups.

The size of the older adult sample was relatively small. Although care was taken to include men in the current study, there was a higher percentage of women overall, which is consistent with many previous studies using older adults. The small subsample sizes were a limitation because they did not allow us to more specifically characterize age and gender differences using the path model. Some results for older men lacked statistical significance, but they were similar in magnitude and direction to findings for other subsamples (e.g., the path between masculine traits and typical depressive symptoms). The lack of statistical significance was likely the result of a small subsample size.

Researchers should be aware that the BSRI-Masculinity scale measures self-described masculine or instrumental traits (e.g., "self-reliant," "assertive"), making it conceptually different from measures of agreement with masculine ideologies (e.g., Male Role Norms Inventory-Revised; Levant, Rankin, Williams, Hasan, & Smalley, 2010), or masculine gender role conflict (e.g., the Gender Role Conflict Scale; O'Neil, 2008). Magovcevic and Addis (2008) used the CMNI to evaluate the MDS in a sample of men. It purports to measure conformity to stated masculine norms (e.g., "In general, I control the women in my life"; Mahalik et al., 2003). When the present study was initiated, research had not yet been published using the CMNI in women (e.g., Parent & Smiler, 2012), so its appropriateness and validity for a female sample were unclear. The BSRI was selected to attempt to answer the research question and to include women in the study.

The BSRI has been used to assess desirable traits for men and women or to categorize participants into groups (i.e., masculine, feminine, or androgynous; Choi & Fuqua, 2003). Some criticism of the scale has stemmed

from its dubious ability to categorize individuals into stable, valid groups (Choi & Fuqua, 2003). Nevertheless, the scale was considered useful as a measure of individuals' *relative* adherence to masculine traits, most of which carried positive connotations (e.g., assertive, independent, athletic). The current results are similar to previous research using the CMNI. Continued exploration of masculine depression, which is largely based on the gender role conflict literature, must be conducted with careful consideration of the exact masculinity construct measured. It seems possible that the current study identified weaker relations between masculine traits and externalizing symptoms because the BSRI measures desirable traits and the CMNI measures hegemonic behaviors or beliefs with a more negative valence.

Future Directions and Implications

Previous research on depressive disorders that has relied primarily on assessment of typical symptoms of depression may have omitted individuals who more strongly endorsed masculine traits. We can begin to bring our focus to these individuals. The inclusion of older adults acknowledges that both gender socialization and psychopathology have developmental aspects. Conclusions cannot yet be made as to whether gender differences in rates of depression diagnosis are due to different experience, expression, or responding to negative affect (Nolen-Hoeksema, 2012). It is not clear yet whether masculine depression represents a different phenotype of depression or differential responding to negative affect in general.

In diagnosis and treatment, clinicians should consider that individuals who strongly endorse masculine traits, both men and women, might display different signs and symptoms of depression and distress than do individuals who do not strongly endorse these traits. Future studies should include community samples of men, women, and older individuals who are at elevated risk for psychological distress or experiencing stressful life events, to better understand the clinical utility of a scale measuring masculine depression or externalizing symptoms. Studying gendered responding or gender differences among populations of individuals who have already been diagnosed with major depressive disorder or another *Diagnostic and Statistical Manual of Mental Disorders*-defined affective illness will not answer the question of who is being missed during assessment.

Researchers should continue to develop and disseminate tools for identifying individuals who adhere to a masculine gender role and who are depressed or distressed, such as the MDS, in clinical and research settings. This goal is especially urgent because of older men's relatively high rates of suicide, which are usually associated with affective disorders (Centers for Disease

Control and Prevention, 2013; Conwell et al., 2011). Identification and treatment of masculine individuals remain a substantial challenge for the field.

The current study sought to examine the relation between masculinity and nontypical depressive symptoms in older and younger men and women. As hypothesized based on the gendered responding framework, endorsement of masculine traits was associated with lower typical depressive symptoms, compared to externalizing symptoms of masculine depression. The relations among these variables appear to vary as a function of gender and age-group. Future research is needed to characterize potential age and gender differences in the gendered responding framework. An expanded use of assessments of externalizing symptoms could help identify masculine individuals experiencing distress.

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Tiffany Fallon and Christopher Kryaninko assisted with data collection and management. The views expressed in this article are those of the authors and do not necessarily reflect the position or policy of the Department of Veterans Affairs or the U.S. government.

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