

Comparison of Clinician- and Self-Assessments of Posttraumatic Stress Symptoms in Older Versus Younger Veterans

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Assessment of posttraumatic stress disorder (PTSD) in older adults has received limited investigation. The purpose of this study was to compare the severity of PTSD symptoms in treatment-seeking older and younger U.S. veterans with PTSD. Participants were 360 male and 284 female veterans enrolled in 2 separate clinical trials of psychotherapy for PTSD. About 4% of the participants were age 60 years or older. Symptoms were assessed before treatment using clinician-rated and self-report measures. For men, only numbing symptoms were lower in older veterans; this was so in clinician ratings, $d = 0.76$, and self-reports, $d = 0.65$. For women, clinician-rated hyperarousal symptoms were lower in older veterans, $d = 0.57$. Clinician-rated and self-reported symptoms were strongly related, $Bs = 0.95$ and 0.80 in the male and female samples, respectively. Among men, clinician-rated and self-reported reexperiencing and hyperarousal symptoms were associated only in younger veterans. Accurate assessment of PTSD symptoms in older adults is essential to identifying and implementing effective treatment. Our findings suggest that some symptoms may be lower in older men, and that some symptoms of PTSD may be undetected in older women. Future research should assess the combined effect of gender and age on PTSD symptom presentation.

A recent Institute of Medicine report estimated that almost one fifth of older Americans have a mental health or substance use disorder (Committee on the Mental Health Workforce for Geriatric Populations, 2012). Although the prevalence of mental disorders is lower among older than younger adults (e.g., Kessler et al., 2005; Troller, Anderson, Sachdev, Brodaty, & Andrews, 2007), mental disorders are a major public health problem in older adults, especially because older individuals represent an increasingly large proportion of the population. In 2010, 13.0% of the U.S. population was over 65; by 2050, the proportion of adults over 65 is projected to rise to 20.2% (United States Census Bureau, 2012). Older adults also represent a large proportion of the U.S. veteran population. In 2010,

40.5% of veterans were 65 years of age or older (Department of Veterans Affairs, 2010).

Despite the growth of interest in posttraumatic stress disorder (PTSD; e.g., Schnurr, 2010), the topic has received limited investigation in older adults. The lifetime prevalence of PTSD in the United States is almost 7% (Kessler et al., 2005). Several epidemiological and community studies, however, have found that PTSD prevalence is lower among older than middle-aged or younger adults (Creamer & Parslow, 2008; de Vries & Olf, 2009; Pietrzak, Goldstein, Southwick, & Grant, 2012). It has been suggested that PTSD may be underreported and underdiagnosed in this population (e.g., Cook, Pilver, Dinnen, Schnurr, & Desai, 2013; Nichols & Czirr, 1986).

The assessment of psychiatric disorders such as PTSD may be particularly challenging in older adults because of cognitive or sensory decline, comorbid mental and physical disorders, or generational differences in the willingness to disclose psychiatric symptoms (Acierno et al., 2002; Thorp, Sones, & Cook, 2011; Wolitzky-Taylor, Castriotta, Lenze, Stanley, & Craske, 2010). Additionally, the amount of time that has passed following traumatic events that occurred in childhood or young adulthood introduces the possibility of memory distortions (Norris, 1992).

The pattern and severity of PTSD symptoms experienced by older adults may also be different than those experienced by younger individuals. Recently traumatized older adults may present different symptom profiles, as suggested by

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Goenjian et al. (1994), who found that although overall PTSD severity was comparable in older and younger earthquake survivors, older individuals exhibited relatively higher hyperarousal symptoms and lower reexperiencing symptoms. PTSD symptom expression may vary across time (e.g., Kato, Asukai, Miyake, Minakawa, & Nishiyama, 1996; Maercker, Gähler, & Schützwohl, 2013; Port, Engdahl, & Frazier, 2001; Scott, Poulin, & Silver, 2013; Zeiss & Dickman, 1989), and symptoms may re-emerge or worsen because of life events such as retirement or loss of a spouse (Hiskey, Luckie, Davies, & Brewin, 2008; Port, Engdahl, Frazier, & Eberly, 2002; Schnurr, Lunney, Sengupta, & Spiro, 2005). Age differences in PTSD prevalence and clinical presentation may depend on demographic factors (e.g., Norris, Kaniasty, Conrad, Inman, & Murphy, 1992). For example, several studies have found that the effect of age on PTSD prevalence is different for men than for women (e.g., Creamer & Parslow, 2008; Ditlevsen & Elklit, 2010; Kessler et al., 2005).

Given these challenges, it is unclear what the best approach is to assess PTSD symptoms in older adults. Structured interviews such as the Clinician-Administered PTSD Scale (CAPS; Blake et al., 1995) are typically considered the gold standard for assessment of PTSD (Weathers, Keane, & Davidson, 2001), even though self-reported measures such as the PTSD Checklist (PCL; Weathers, Litz, Herman, Huska, & Keane, 1993) correspond closely to clinician-rated measures (e.g., Monson et al., 2008). Prior studies have shown that both the CAPS and PCL perform well in older adults (Cook, Elhai, & Areán, 2005; Schnurr, Spiro, Vielhauer, Findler, & Hamblen, 2002; Yarvis, Yoon, Ameuke, Simien-Turner, & Landers, 2012). A lower cutoff threshold for probable PTSD, however, is recommended when using the PCL with older adults (e.g., Cook et al., 2005; Yeager & Magruder, in press).

Additionally, results of a chart review of data from male veterans suggest that there may be age-related differences in patterns of self-rated and clinician-assessed PTSD symptoms. Frueh et al. (2004) found that although self-rated PTSD severity did not differ between older (age 60+) and younger (age 59 and below) groups, clinician ratings of PTSD severity were lower in the older group. Clinician-rated avoidance, numbing, and hyperarousal (but not reexperiencing) symptoms were also lower for older veterans; there were no analogous comparisons using the self-reported PTSD symptom measure.

Accurate assessment of PTSD symptoms in older adults is essential to identifying and implementing appropriate and effective treatment of PTSD. Age-related differences, such as the willingness to disclose psychiatric symptoms or potential generational differences in symptom reporting (e.g., Cook et al., 2013; Creamer & Parslow, 2008), may result in differences in PTSD symptom profiles using a clinician-rated versus self-report measure of PTSD for older adults, or a difference in the degree of association of these two types of measures for older versus younger adults.

The primary aim of the current study was to compare the severity and pattern of PTSD symptoms in two samples of

veterans with PTSD (Schnurr et al., 2003, 2007). Because of differences between the two samples, such as gender, era of service, and the nature and timing of index trauma, results for each sample are presented separately. We extended Frueh et al.'s (2004) investigation by including both male and female veterans and by examining age differences in each PTSD symptom cluster using both a clinician-rated assessment (CAPS; Blake et al., 1995) and a self-report measure (PCL; Weathers et al., 1993). Based on Frueh et al.'s findings, we expected PTSD symptom severity to be lower in older versus younger adults on the clinician-rated measure, but not on the self-reported measure.

A secondary aim was to assess the degree of correspondence between self-report and clinician-rated PTSD symptom severity in older versus younger veterans with PTSD. To our knowledge, no study has directly compared the association between clinician- and self-assessments of PTSD symptoms in older versus younger adults. Based on past studies of the PCL (e.g., Cook et al., 2005; Yarvis et al., 2012), and Monson et al.'s (2008) study showing a high degree of association between the PCL and the CAPS, we expected that the two measures would be strongly associated. Because some have suggested that PTSD symptoms are underreported or underdetected in older adults (e.g., Cook et al., 2013; Nichols & Czirr, 1986), we expected that age would moderate the relationship between clinician-rated and self-reported PTSD symptoms.

Method

Participants and Procedure

An institutional review board at each site approved the research protocol, and participants provided written informed consent before study enrollment, coordinated by the Committee for the Protection of Human Subjects at the Geisel School of Medicine. Details about the methods (Schnurr, Friedman, Lavori, & Hsieh, 2001; Schnurr et al., 2005) and primary findings (Schnurr et al., 2003, 2007) have been published previously.

Participants were 360 male Vietnam veterans with combat-related PTSD (Schnurr et al., 2003) and 284 female veterans and active duty personnel with PTSD (Schnurr et al., 2007) who were enrolled in separate multisite randomized clinical trials of cognitive-behavioral therapy for PTSD.

The inclusion and exclusion criteria were highly similar for the two samples. For the male sample, inclusion criteria included a diagnosis of current PTSD; PTSD symptom severity of 45 or higher on the CAPS; agreeing to not participate in other psychotherapy for PTSD except for 12-step programs and medication during study treatment; a stable regimen of at least 2 months for those taking psychoactive medication; and service in the Vietnam war. Exclusion criteria were current or lifetime psychotic disorder, mania, or bipolar disorder; current major depression with psychotic features; current alcohol or drug dependence; prominent current suicidal or homicidal ideation; significant cognitive impairment; unwillingness to refrain from substance abuse at treatment or work; and severe

cardiovascular disorder. Combat exposure was the index trauma for all participants.

For the female sample, inclusion criteria were a diagnosis of current PTSD; symptom severity of 45 or higher on the CAPS; three or more months since the trauma; a clear memory of the trauma; agreeing to not participate in other psychotherapy for PTSD except for 12-step programs and medication during study treatment; and a stable regimen of at least 2 months for those taking psychoactive medication. Exclusion criteria were current psychotic disorder, mania, or bipolar disorder; current major depression with psychotic features; current alcohol or drug dependence; prominent current suicidal or homicidal ideation; significant cognitive impairment; current involvement in a violent relationship; or self-mutilation within the past 6 months. On average, women had exposure to almost 10 different trauma types. The most common index trauma was sexual trauma ($n = 194$; 68.3%).

The average age of male participants was 50.61 years ($SD = 3.61$). About 3% ($n = 12$) were 60 years of age or older ($M = 63.83$, $SD = 4.24$, range = 60–74). The remaining 97% ($n = 348$) were younger than 60 years ($M = 50.15$, $SD = 2.58$, range = 44–59). The average age of female participants was 44.79 years ($SD = 9.44$). Five percent ($n = 13$) were 60 years old or older ($M = 65.15$, $SD = 4.88$, range = 60–78). The remaining 95% ($n = 271$) were younger than 60 ($M = 43.81$, $SD = 8.45$, range = 22–59). Sample characteristics by age group and study are presented in Table 1. Among male veterans, a higher percentage of older than younger veterans had more than a high school education and were married. All male veterans 60 years old or older had a VA service-connected disability compared with 69.8% of those under 60. Among female

veterans, a lower percentage of older veterans were non-White compared with younger veterans, and none of the older veterans were working.

Clinician-rated assessments were administered by a master's- or doctoral-level clinician who was blind to participants' treatment assignment. All data reported in the current study were collected prior to treatment.

Measures

Clinician-rated PTSD symptom severity was assessed using the CAPS (Blake et al., 1995). The frequency and intensity of each of the 17 PTSD symptoms based on the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., *DSM-IV*; American Psychiatric Association, 1994) was rated on a 5-point scale (from 0–4). Symptom severity is the sum of frequency and intensity ratings. Interrater reliability for the CAPS was excellent. Intraclass correlations for CAPS severity were .85 and .92 for the male and female samples, respectively (Schnurr et al., 2003; 2007). Self-reported PTSD symptom severity was measured using the PCL-M (military) in the male sample and the PCL-S (specific) in the female sample (Weathers et al., 1993). Participants rated how much each of the *DSM-IV* PTSD symptoms bothered them in the past month on a 5-point scale from 1 = *not at all* to 5 = *extremely*. For the CAPS, PCL-M, and PCL-S, symptom cluster scores were computed for reexperiencing, avoidance, numbing, and hyperarousal. The C cluster was separated into avoidance (C1, C2) and numbing (C3–C7), based on evidence that they form separate symptom clusters (e.g., King, Leskin, King, & Weathers, 1998). Cronbach's α for the PCL subscales ranged from .71 to .85 in the male sample and from .70 to .84 in the female sample.

Table 1
Differences in Veteran Demographic Characteristics by Age Separately by Study

Variable	Male veterans ($n = 360$)					Female veterans ($n = 284$)				
	Age < 60 ($n = 348$)		Age < 60 ($n = 12$)		Effect size ^a	Age < 60 ($n = 13$)		Age < 60 ($n = 271$)		Effect size
	<i>n</i> or <i>M</i>	% or <i>SD</i>	<i>n</i> or <i>M</i>	% or <i>SD</i>		<i>n</i> or <i>M</i>	% or <i>SD</i>	<i>n</i> or <i>M</i>	% or <i>SD</i>	
Non-White race	113	32.5	7	58.3	2.91	128	47.2	1	7.7	0.09**
>HS education	229	65.8	12	100.0	13.02*	242	89.3	11	84.6	0.66
Married	173	49.7	11	91.7	11.13**	83	30.6	7	53.9	2.64
Working	93	26.7	3	25.0	0.91	111	41.0	0	0.0	0.05**
SC disability	243	69.8	12	100.0	10.83*	142	53.8	4	33.3	0.43
SC PTSD disability	199	57.2	6	50.0	0.75	62	23.4	1	8.3	0.30
Current MDD	131	37.6	4	33.3	0.83	135	49.8	7	53.9	1.18
Current ANX disorder	111	31.9	5	41.7	1.53	129	47.6	7	53.9	1.28
Social impairment	2.85	0.78	2.67	0.65	0.23	2.75	0.75	2.38	0.87	0.49
Occupational impairment	2.54	0.97	2.25	0.87	0.30	2.39	0.96	2.15	1.07	0.25

Note. Social and occupational impairment are rated on a scale from 0 to 4 as part of the Clinician-Administered PTSD scale.

HS = high school; SC = service-connected; PTSD = posttraumatic stress disorder; MDD = major depressive disorder; ANX = anxiety.

^aEffect sizes are odds ratios (for dichotomous variables) and Cohen's d (for continuous variables). A correction of 0.5 was used in tables with any cell frequency of 0. Asterisks indicate significance of Fisher's exact χ^2 or t tests comparing the two age groups.

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

Data Analysis

All analyses were conducted separately for the male and female veteran samples because of differences between the samples, such as service era and the nature and timing of the index trauma. We examined age group differences in demographic characteristics using Fisher's exact χ^2 tests or t tests. We evaluated how PTSD symptoms differed as a function of age by conducting t tests comparing mean clinician-rated and self-reported PTSD symptom cluster severity in younger versus older veterans. Cohen's d (1988) was calculated as a measure of effect size for continuous measures and odds ratios (ORs) were calculated for dichotomous measures. For computation of ORs , a correction of 0.5 was added to tables with any cell frequency of 0.

To examine whether the association between clinician-rated and self-reported PTSD symptoms differed as a function of age group, we conducted a series of multiple regression analyses with clinician-rated symptoms as the dependent measure, and self-reported symptoms and age group as regressors. Self-reported symptom measures were mean-centered. In the first model, we estimated clinician-reported symptoms from self-reported symptoms to assess the association between the two measures. In the second model, we added age group (0 = younger than 60 years; 1 = 60 and older). To test whether the relationship between self-reported and clinician-assessed symptoms differed by age group, in the third model we included the interaction between self-reported symptoms and age group. Models were estimated separately for overall PTSD symptom severity, and the four PTSD symptom clusters. Conditional effects for significant interactions were estimated using PROCES for SAS (Hayes, 2013).

Results

Average clinician-rated PTSD symptom severity by age group and gender is presented in Table 2. Among men, overall mean clinician-rated symptom severity was lower for older men than for younger men, $t(358) = 2.25, p = .025$. Clinician-rated numbing symptoms were also lower for the older group than the younger group, $t(358) = 2.59, p = .010$. There were no other significant age differences in any other clinician-rated symptom measures for male veterans. Among women, mean clinician-rated hyperarousal was significantly lower for older versus younger women, $t(282) = 2.01, p = .046$. Average self-reported PTSD symptom severity by age group and gender is presented in Table 2. Similar to clinician ratings, older men had significantly lower self-reported numbing symptoms than younger men, $t(358) = 2.22, p = .027$. For women, mean self-reported symptom severity tended to be higher for older than for younger women, although none of the differences were statistically significant.

To better understand the basis for age differences in numbing for men, we performed exploratory analyses to examine the effects of age for the individual symptoms within the numbing cluster for both clinician-ratings and self-reports. For clinician-rated numbing, the older men had lower trauma-related amnesia (C3), lower detachment (C5), and lower restricted range of affect (C6) on the clinician-rated measure (trauma-related amnesia: $M_{\text{older}} = 0.42$ vs. $M_{\text{younger}} = 2.70, t(358) = 2.85, p = .005$; detachment: $M_{\text{older}} = 4.67$ vs. $M_{\text{younger}} = 6.12, t(358) = 3.02, p = .003$; restricted affect: $M_{\text{older}} = 3.75$ vs. $M_{\text{younger}} = 5.49, t(358) = 2.93, p = .004$). On the self-report measure, the older men had lower detachment (C5) and lower restricted range of affect (C6) than the younger men

Table 2
Differences in Veterans' Clinician-Rated and Self-Reported PTSD Symptoms by Age Separately by Study

Variable	Male veterans ($n = 360$)					Female veterans ($n = 284$)				
	Age < 60 ($n = 348$)		Age 60+ ($n = 12$)		d	Age < 60 ($n = 271$)		Age 60+ ($n = 13$)		d
	M	SD	M	SD		M	SD	M	SD	
Clinician-rated PTSD (CAPS)										
Total	81.73	18.45	69.67	11.93	0.66*	78.62	16.45	71.23	13.45	0.45
Reexperiencing	22.26	7.12	19.92	6.37	0.33	21.27	7.01	18.69	7.96	0.37
Avoidance	10.55	3.73	9.58	3.94	0.26	10.94	3.33	9.54	3.62	0.42
Numbing	22.99	7.48	17.33	6.37	0.76*	20.97	6.63	21.08	6.12	-0.02
Hyperarousal	25.93	6.14	22.83	5.41	0.51	25.44	6.11	21.92	7.22	0.57*
Self-reported PTSD (PCL ^a)										
Total	62.47	11.60	57.33	12.52	0.44	57.49	12.72	60.46	9.34	-0.24
Reexperiencing	17.55	4.15	16.17	5.52	0.33	16.35	4.63	16.69	5.02	-0.07
Avoidance	7.55	1.90	7.50	1.68	0.03	7.45	2.09	7.85	1.95	-0.19
Numbing	18.13	4.16	15.42	4.32	0.65*	15.74	4.50	17.00	3.61	-0.28
Hyperarousal	19.24	3.82	18.25	3.44	0.26	17.94	4.11	18.92	2.63	-0.24

Note. PTSD = posttraumatic stress disorder; CAPS = Clinician-Administered PTSD Scale; PCL = PTSD Checklist.

^aThe PCL-M (military) was used for the male sample and the PCL-S (specific) was used for the female sample.

* $p < .05$.

Table 3
Multiple Regressions Estimating Clinician-Rated PTSD Symptoms from Self-Reported PTSD Symptoms and Age Separately by Study

Variable	Overall severity		Reexperiencing		Avoidance		Numbing		Hyperarousal	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Male veterans (<i>n</i> = 360)										
Model 1										
PCL-M	0.95***	0.07	1.00***	0.07	0.89***	0.09	0.99***	0.08	0.86***	0.07
Model 2										
PCL-M	0.94***	0.07	1.00***	0.07	0.89***	0.09	0.97***	0.08	0.85***	0.07
Age ^a	-7.24	4.32	-0.97	1.69	-0.92	0.98	-3.20	1.85	-2.25	1.52
Model 3										
PCL-M	0.97***	0.07	1.04***	0.07	0.88***	0.09	0.97***	0.08	0.88***	0.07
Age	-10.98*	4.63	-1.88	1.73	-0.91	0.98	-2.74	2.17	-3.23*	1.58
PCL-M × Age	-0.78*	0.36	-0.73*	0.32	0.13	0.61	0.11	0.45	-1.05*	0.46
Female veterans (<i>n</i> = 284)										
Model 1										
PCL-S	0.80***	0.06	0.77***	0.08	0.63***	0.09	0.84***	0.07	0.93***	0.07
Model 2										
PCL-S	0.81***	0.06	0.78***	0.08	0.64***	0.09	0.85***	0.07	0.93***	0.07
Age	-9.79*	3.64	-2.84	1.73	-1.65	0.87	-0.96	1.54	-4.44**	1.38
Model 3										
PCL-S	0.81***	0.06	0.76***	0.08	0.62***	0.09	0.85***	0.07	0.94***	0.07
Age	-9.22*	3.80	-2.96	1.73	-1.80*	0.89	-0.81	1.63	-4.13**	1.47
PCL-S × Age	-0.21	0.40	0.40	0.36	0.41	0.46	-0.13	0.44	-0.33	0.54

Note. PTSD = posttraumatic stress disorder; PCL-M = PTSD Checklist (military); PCL-S = PTSD Checklist (specific).

^aAge is coded 0 for those less than 60 years old and 1 for those 60 or older.

p* < .05. *p* < .01. ****p* < .001.

(detachment: $M_{\text{older}} = 3.25$ vs. $M_{\text{younger}} = 4.11$, $t(358) = 3.09$, $p = .002$; restricted affect: $M_{\text{older}} = 3.00$ vs. $M_{\text{younger}} = 3.72$, $t(358) = 2.14$, $p = .033$).

Similarly, we performed exploratory analyses for age differences in individual hyperarousal symptoms for women. Older women had lower clinician-rated sleep difficulties (D1) and lower irritability (D2) (sleep: $M_{\text{older}} = 4.92$ vs. $M_{\text{younger}} = 6.30$, $t(282) = 2.38$, $p = .018$; irritability: $M_{\text{older}} = 3.38$ vs. $M_{\text{younger}} = 4.83$, $t(282) = 2.67$, $p = .008$). Looking at self-reported individual hyperarousal symptoms, there were age differences only slightly above .05 in hypervigilance (D4) and startle response (D5), although for these symptoms, average severity was higher in older women (hypervigilance: $M_{\text{older}} = 4.31$ vs. $M_{\text{younger}} = 3.72$, $t(282) = -1.75$, $p = .080$; irritability: $M_{\text{older}} = 4.00$ vs. $M_{\text{younger}} = 3.39$, $t(282) = -1.76$, $p = .080$).

Table 3 contains the results of the multiple regressions estimating clinician-rated symptoms from self-reported symptoms and age group. Self-reported symptoms were strongly related to clinician-ratings of overall severity and all symptom clusters for both men and women. There was an interaction between age and self-reported symptoms for overall symptom severity, re-experiencing, and hyperarousal in the male sample. Examining the conditional effects for these interactions, we found an association between clinician-rated and self-reported symptoms for

the younger, but not for the older group. Among younger male veterans, there was a significant relationship between clinician-rated and self-reported symptoms for overall severity, $B = 0.97$ ($SE = 0.07$), reexperiencing, $B = 1.04$ ($SE = 0.07$), and hyperarousal, $B = 0.88$ ($SE = 0.07$), all $ps < .001$. Among older male veterans, clinician-rated and self-reported symptoms were not related for overall severity, $B = 0.18$ ($SE = 0.35$), reexperiencing, $B = 0.31$ ($SE = 0.31$), or hyperarousal, $B = -0.17$ ($SE = 0.45$), all nonsignificant.

Discussion

The current study extended the findings of Frueh et al. (2004) by comparing symptom profiles in older and younger veterans with PTSD using both a clinician-rated and a self-rated measure of PTSD in both male and female veterans. In Frueh et al.'s study, older and younger veterans did not differ in self-reported PTSD symptom severity, but older adults had lower overall clinician-rated PTSD severity. We found age differences in clinician-rated overall symptom severity and numbing (for men), and hyperarousal (for women). For self-reported symptoms, only numbing symptoms were significantly lower for older men. Although this pattern of differences for overall severity in the male sample, and for hyperarousal in the female

veteran sample, is consistent with the suggestion that PTSD symptoms may be underdetected by clinicians (e.g., Cook et al., 2013; Nichols & Czirr, 1986), numbing symptoms were significantly lower in older men for both clinician-ratings and self-reports.

Given the high prevalence of sleep disorders among older adults (e.g., Neikrug & Ancoli-Israel, 2010), it may seem surprising that sleep problems were lower for older versus younger women in our sample. It is possible that sleep disturbances are more likely to be attributed to other causes, such as medication, physical ailments, or the natural course of aging, rather than to PTSD. Another possibility is that sleep problems associated with PTSD may change over the course of the lifespan (e.g., Babson & Feldner, 2010; Engdahl, Eberly, Hurwitz, Mahowald, & Blake, 2000; Kobayashi, Boarts, & Delahanty, 2007). Age differences in expression of anger or emotional regulation may account for lower ratings of irritability in older female veterans (e.g., Blanchard-Fields & Coats, 2008; Zimprich & Mascherek, 2012). Exploratory analyses revealed age differences for several numbing symptoms in male veterans. Frueh et al. (2004) also found lower clinician-rated numbing symptoms in older versus younger veterans with PTSD; in our sample, we found differences in numbing symptoms in male veterans on both clinician-rated and self-report measures.

A secondary aim was to determine the degree of association of these two measures of PTSD symptom severity as a function of age group. As we would expect from previous studies (e.g., Monson et al., 2008), clinician-rated and self-reported symptoms were strongly associated; the association, however, differed as a function of age group for overall symptom severity, reexperiencing, and hyperarousal symptoms in the male veteran sample. For these outcomes, we found an association between clinician-rated and self-reported symptoms for the younger group, but not for the older group. Previous studies (Cook et al., 2005; Yarvis et al., 2012) found the PCL to have adequate reliability and validity in older civilian and veteran samples, but neither of these studies compared self-reported PTSD with clinician-rated symptoms.

Differences between the two samples must be considered when comparing the pattern of results across the two studies. The male sample includes only Vietnam veterans, whereas the female participants served in multiple service eras. The timing and nature of the index trauma differed between the two studies. The index trauma for all male participants was combat exposure in Vietnam, which occurred over 30 years prior to assessment. Thus, time since the index trauma was relatively similar for all participants, regardless of age. For female participants, sexual trauma was the most common index trauma and average time since the index trauma was about 23 years prior to assessment (range = 0–58 years). Differences between older and younger female participants may be due in part to differences in the recency of traumatic exposure. The samples also differ on demographic variables such as education and disability compensation (Schnurr & Lunney, 2008). Even though these

differences reflect differences in male and female VA patients as a whole, and the studies are comparable in many respects (e.g., similar recruitment strategies and inclusion/exclusion criteria), differences in the pattern of the results may not be due to gender, but to other differences between the studies. Future research addressing age and gender differences in PTSD symptom presentation is needed. Although there are gender differences in trauma exposure, PTSD prevalence, symptom profiles, and comorbidities (Kimerling, Ouimette, & Weitlauf, 2007; Olff, Langeland, Draijer, & Gersons, 2007), less is known about the effect of gender on PTSD across the lifespan.

The current study has several limitations. The small number of older participants in the sample limits the generalizability of the findings and the statistical power to detect differences between older and younger veterans. Because the study is cross-sectional, age effects cannot be clearly distinguished from cohort effects. Further investigation with age cohorts tracked longitudinally is needed to provide greater separation of age and cohort effects. It is not clear whether our findings would generalize to nontreatment-seeking samples, nonveterans, or those without current PTSD.

It is not possible here to definitively determine whether age-related differences in clinician-rated and self-reported symptoms reflect underdetection of symptoms on the part of clinicians or overreporting of symptoms by older adults. Underdiagnosis of older adults has been reported in other mental health disorders (Gallo, Ryan, & Ford, 1999; Mitchell, Rao, & Vaze, 2010). Whether the problem in PTSD is comparable to this issue in other disorders requires further study.

Inappropriate diagnosis or underdetection of symptoms can lead to inadequate treatment plans or administration of poorly focused or inappropriate treatment (Allers, Benjack, & Allers, 1992; Wolkenstein & Serman, 1998). Those who do not receive effective therapy may not improve on related distress. The aging of the general population in general, and of veterans in particular, presents challenges to the assessment and treatment of psychiatric disorders. Our findings suggest that understanding the effect of age on PTSD symptom presentation is an important part of meeting these challenges.

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