

# Prevalence of Physical and Sexual Assault and Mental Health Disorders in Older Women: Findings From a Nationally Representative Sample

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**Objectives:** *This study presents prevalence and characteristics of physical and sexual assaults, and their relationship to posttraumatic stress disorder (PTSD), and mood and anxiety disorders in a nationally representative sample of older women.*

**Design and Setting:** *Face-to-face interviews conducted with adult participants from wave 2 of the National Epidemiological Survey on Alcohol and Related Conditions.*

**Participants:** *A total of 3,354 community-residing women of age 65 years and older.*

**Measurement:** *Alcohol Use Disorder and Associated Disabilities Interview Schedule for Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, current mood and anxiety disorders.*

**Results:** *Almost 14% of participants reported a history of physical or sexual assault or both during their lifetimes. Assaults were often repeated rather than isolated events. Although the majority of participants did not identify interpersonal violence as their “worst” traumatic event, those who experienced interpersonal violence were generally more likely than those without such history to meet the criteria for past-year and lifetime PTSDs, depression, and anxiety.* **Conclusions:** *Some women who have been physically or sexually assaulted decades earlier continue to report significant levels of mood and anxiety disorders into late adulthood. Several ways to increase the identification and treatment of older female trauma survivors by healthcare providers are suggested.* (Am J Geriatr Psychiatry 2013; 21:877–886)

**Key Words:** Geriatric, interpersonal violence, PTSD, women

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Although much is known about the prevalence of physical and sexual assault and associated distress among young and middle-aged women,<sup>1</sup> relatively less is recognized about this type of interpersonal violence (IPV) in older women.<sup>2</sup>

Understanding the prevalence and psychiatric effects of physical and sexual assault in older women is important for several reasons. Older women or their healthcare providers' lack of recognition of the effects of trauma may lead to inappropriate

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diagnosis, inadequate treatment plans, and administration of poorly focused or inappropriate psychotherapy, pharmacotherapy, or other medical intervention.<sup>3,4</sup> For example, individuals with post-traumatic stress disorder (PTSD) who do not receive psychotherapy or receive some form of present-centered or supportive psychotherapy have poorer outcomes than those who receive evidence-based treatments.<sup>5,6</sup>

Older women who had been physically or sexually assaulted decades earlier continue to report significant levels of mental health problems well into their sixth and seventh decades.<sup>7,8</sup> However, the true extent of the problem is unknown because most prevalence estimates of assault and its relation to psychopathology in this population have been derived from convenience samples<sup>9–12</sup> and were based on self-report measures, some of which only capture general distress.<sup>8,10,13</sup> In two studies<sup>7,14</sup> that were based on nationally representative samples, the number of participants was relatively small, and although one study<sup>7</sup> included diagnostic measures, few individuals actually met full criteria, making it difficult to directly examine the effects of IPV on mental health disorders.

There are no known reports on the prevalence of a wide range of traumatic events corresponding to diagnostic criteria for PTSD in a representative sample of older women. No research on IPV in older women has examined the co-occurrence of these other traumas with physical or sexual assault or examined the effects of both physical and sexual assault. Acierno and colleagues<sup>7</sup> examined the presence or absence of physical or sexual assault but not the prevalence and psychiatric impact of both physical and sexual assaults or of other traumas.

Moreover, we do not know what older women consider to be their “worst” traumatic event. Younger women often identify IPV as their worst event,<sup>15</sup> whereas younger men often identify assaultive violence and sudden unexpected death of a close relative or friend as worst.<sup>16</sup> Although normative events of late adulthood, such as greater susceptibility to physical illness, bereavement, and retirement may cause stress, they are unlikely to lead to PTSD, but may still affect women’s experiences of traumatic occurrences. Unique cohort or developmental issues may influence reporting of IPV and recognition of its potential effects.

The purpose of this study was to expand knowledge about IPV in older women by examining physical and sexual assaults and associated mental health disorders in this cohort. We used data from a nationally representative sample of U.S. adults who participated in wave 2 of the National Epidemiological Survey on Alcohol and Related Conditions (NESARC).<sup>17</sup> The sample is large and ethnically diverse; assessments of trauma exposure and mental health outcomes were based on trained lay interviewers rather than self-report; and sufficient numbers of older women met diagnostic criteria for mood and anxiety disorders. Specific objectives were to determine: 1) lifetime prevalence of trauma with particular emphasis on physical and sexual assaults and characteristics of exposure; and 2) the relationship between trauma and past-year and lifetime mental health disorders. In both sets of analyses, we specifically focused on physical and sexual assaults.

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## METHODS

Data were from NESARC wave 2, a nationally representative, longitudinal study of noninstitutionalized adults living in the United States. In 2004–2005, 34,653 of the 43,093 NESARC wave 1 participants (86.7%) were reinterviewed. The cumulative response rate for waves 1 and 2 is 70.2%. Data are weighted to reflect unequal probability of selection and differential response rates across demographic groups in concordance with 2000 Decennial Census data. Of the wave 2 participants, we excluded 14,564 men and 15,662 women younger than 65 and 52 women of age 65 years and older who did not have valid data for either sexual or physical assaults. Of the remaining 4,375 women of age 65 to 90 years, 1,021 (21.5%) who did not report lifetime traumatic exposure were excluded.\* Thus, the final sample included 3,354 women.

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\*Compared with women who reported a history of trauma exposure, nontraumatized women were significantly older, more likely to be nonwhite, have less than a high school education, and have lower household incomes. Of the older women who did not indicate experience of any traumatic event, 7.11% (N = 78) and 21.78% (N = 230) met any past-year or current mood or anxiety disorders, respectively. It is possible that some of these women chose not to report a traumatic event and these high levels of distress also reflect the influence of trauma.

Experienced lay interviewers who administered the diagnostic instrument were selected from the U.S. Census Bureau based on a number of strict criteria, including having an average of 5 years of experience administering census surveys.<sup>17</sup> Interviewers completed a 5-day self-study and a standardized 5-day training session and received quality checks on their administration. To ensure quality control, a random 10% of survey participants were recontacted by regional supervisors and asked a series of questions designed to verify if the interview had been properly conducted. Interviews of all the 2,657 recontacted participants were judged to have been conducted appropriately. In addition, interviewers utilized computer-assisted software to aid in consistency checks, logic, and built-in skip patterns.

Diagnoses were based on the Alcohol Use Disorder and Associated Disabilities Interview Schedule–IV,<sup>17</sup> a reliable, valid measure<sup>18,19</sup> of lifetime and past-year alcohol and drug use, five mood (i.e., major depressive, bipolar I and II, dysthymia, and hypomania), five anxiety (i.e., panic with and without agoraphobia, social phobia, specific phobia, generalized anxiety, and PTSD), and personality disorders from the *Diagnostic and Statistical Manual for Mental Disorders—Fourth Revision* (DSM-IV).<sup>20</sup>

In the Alcohol Use Disorder and Associated Disabilities Interview Schedule–IV PTSD module, participants were asked to indicate whether they had ever experienced any of 27 potentially traumatic events that operationalized DSM-IV Criterion A1. Participants with multiple traumas were asked to identify one event they considered to be the “worst.” Criterion A1 was further assessed with the following question: “At the time that worst (or single) event happened, did you think that you or someone very close to you might die, be seriously injured, or permanently disabled?” Criterion A2 was assessed by the asking if the participant felt “extremely frightened, helpless, or horrified about what was happening” during the worst (or single) event. Participants who responded positively to Criteria A1 and A2 were asked 17 questions corresponding to DSM-IV PTSD criteria for reexperiencing, avoidance or numbing, and hyperarousal symptoms, plus two questions about duration and about distress/impairment. PTSD was diagnosed strictly according to the DSM-IV criteria, at least one reexperiencing, three avoidance/numbing symptoms, and two

hyperarousal symptoms; duration of more than 1 month; and functional impairment resulting from these symptoms.

There were two dependent variables: past-year and lifetime mental illnesses. Past-year mental illness was a nominal variable with four mutually exclusive levels: 1) PTSD only; 2) PTSD with any of the five comorbid mood disorders and/or five comorbid anxiety disorders; 3) any mood and/or anxiety disorder without comorbid PTSD; and 4) no PTSD, mood, or anxiety disorders. Lifetime history of mental illness had the same four mutually exclusive levels of response.

We assigned participants to one of the four mutually exclusive trauma history categories based on their reported exposure to traumatic events: 1) physical assault with or without other traumas (excluding sexual assault), 2) sexual assault with or without other traumas (excluding physical assault), 3) both physical and sexual assaults with or without other traumas, and 4) other traumas only. Physical assault included “beaten up before age 18,” “beaten up by spouse/romantic partner,” and/or “beaten up by someone else.” Sexual assault included being “sexually assaulted as an adult or child.” Other types of potentially traumatic events included direct trauma (i.e., military combat; relief worker in war zone; unarmed civilian in war zone; refugee; serious or life-threatening accident; serious or life-threatening illness; disaster; serious neglect by caregiver before age 18 years; held hostage; stalked; mugged or threatened with weapon; injured in terrorist attack and experience terrorist attack; witnessed trauma (e.g., seeing someone badly injured or killed; witness domestic violence at home before age 18 years; and confronted with trauma (e.g., a loved one died unexpectedly, someone close to you had a serious illness, accident; someone close to you died in terrorist attack; someone close to you injured in terrorist attack; someone close to you experienced terrorist attack; someone close had any other extremely stressful event); and trauma not specified. As in a recent report on potentially traumatic events utilizing NESARC data,<sup>21</sup> we excluded one event (indirect exposure to terrorist attack through TV or radio) because it is unlikely to produce PTSD.<sup>22</sup>

We used SUDAAN 9.0.3 (RTI International, Research Triangle Park, NC) for all analyses. SUDAAN software is designed to handle weighted survey data from complex sampling designs. Sample characteristics and prevalence of trauma types were

calculated using PROC CROSSTABS for categorical variables and PROC DESCRIPT for continuous variables. PROC DESCRIPT and PROC REGRESS (SAS Institute Inc., Cary, NC) were used to describe and test group differences in physical and sexual assault characteristics. Statistical significance was evaluated with the Wald  $\chi^2$  test statistic. To examine the relationship between trauma and mental illness (past-year and lifetime), separate multinomial logistic regression models were constructed using PROC MULTLOG. Age, race, marital and employment statuses, educational attainment, and household income were included as covariates. The independent variable and covariates entered the model simultaneously. Adjusted odds ratios, 95% confidence intervals, and *t*-statistics for individual parameter estimates are presented.

## RESULTS

Of the 3,354 women, 260 (6.8%) reported a lifetime history of physical assault with or without other

traumas, 129 (3.6%) reported sexual assault with or without other traumas, 95 (2.6%) reported experiencing both physical and sexual assaults with or without other traumas, and 2,870 (87.0%) reported a history of other traumas only. Table 1 presents demographic characteristics of the overall sample according to lifetime trauma history. The average age was 75 years. Although the majority was non-Hispanic white, almost 17% were ethnic minorities. Most were married or separated/widowed/divorced. The majority had at least a high school education. Most were not currently working. Almost 40% had household incomes below \$20,000.

Marital status, educational attainment, and current age were significantly associated with the type of women's exposure to trauma. Among women reporting physical assault or physical and sexual assaults, a greater percentage was separated/widowed/divorced compared with women reporting other traumas or sexual assault only. Educational attainment was lower among women reporting physical assault compared with all other women. Women reporting both sexual and physical assaults were, on average, younger than all other women.

TABLE 1. Demographic Characteristics of Sample

Demographic Characteristic	Total Sample <sup>a,b</sup> (N = 3,354)	Other Traumas Only <sup>a,b</sup> (N = 2,870)	Physical Assault <sup>a,b,c</sup> (N = 260)	Sexual Assault <sup>a,b,c</sup> (N = 129)	Sexual Assault and Physical Assault <sup>a,b,c</sup> (N = 95)	$\chi^2$ (df)	p
Race						1.90 (9)	0.068
Non-Hispanic white	2,368 (83.20)	2,061 (83.72)	153 (74.59)	93 (88.07)	61 (81.45)		
Black	555 (7.37)	456 (7.11)	60 (11.53)	21 (5.75)	18 (7.50)		
Hispanic	332 (4.95)	275 (4.83)	33 (6.72)	2 (1.30)	5 (6.73)		
Other	99 (4.49)	78 (4.34)	14 (7.17)	13 (4.88)	11 (4.32)		
Marital status						2.93 (6)	0.0134
Married	1,096 (45.66)	975 (46.73)	61 (35.28)	39 (45.50)	21 (37.39)		
Divorced/separated/widowed	2,110 (51.16)	1,766 (50.09)	193 (62.80)	80 (48.45)	71 (60.27)		
Never married	148 (3.18)	129 (3.18)	6 (1.92)	10 (6.05)	3 (2.35)		
Educational Attainment						2.54 (9)	0.015
Less than high school	890 (23.26)	727 (22.48)	103 (35.67)	31 (20.03)	29 (21.75)		
Completed high school	1,148 (35.83)	1,002 (36.45)	83 (33.38)	39 (33.34)	24 (24.77)		
Some college	800 (24.79)	688 (24.58)	52 (22.56)	35 (28.14)	25 (32.88)		
Completed college or above	516 (51.6)	453 (16.49)	22 (8.39)	24 (18.50)	17 (20.59)		
Employment status						1.03 (6)	0.416
Full-time	167 (4.72)	137 (4.49)	14 (5.44)	7 (5.17)	9 (9.92)		
Part-time	242 (7.12)	195 (6.75)	22 (8.62)	15 (12.06)	10 (8.94)		
Other	2,945 (88.16)	2,538 (88.77)	224 (85.94)	107 (82.77)	76 (81.14)		
Household income, \$						1.80 (9)	0.086
0–19,999	1,600 (38.72)	1,342 (38.23)	144 (46.04)	63 (37.69)	51 (37.61)		
20,000–34,999	840 (27.09)	724 (26.63)	63 (31.12)	31 (26.85)	22 (32.28)		
35,000–69,000	666 (24.53)	583 (25.05)	39 (17.49)	25 (25.43)	19 (24.12)		
70,000+	248 (9.65)	221 (10.08)	14 (5.34)	10 (10.03)	3 (5.98)		
Current age, years	75.13 (0.13)	75.48 (0.15)	73.34 (0.44)	73.82 (0.65)	70.14 (0.59)	91.36 (3)	0.001

<sup>a</sup>N (weighted %) for categorical variables; numbers may not sum to total because of missing data.

<sup>b</sup>Mean (SE) for continuous variables.

<sup>c</sup>Individuals may or may not have experienced other traumas as well.

Table 2 presents a descriptive analysis of type, onset, and age at most recent occurrence in those who reported physical and/or sexual assault history. These data indicate that some women experience assault throughout their lifetimes, from parents, spouses, and strangers, and attacks are often repeated rather than isolated events. The mean age at both first and most recent incidents of sexual assault was significantly older for women reporting a history of both physical and sexual assaults, compared with women who reported sexual assault only. In contrast, the mean age at both first and most recent physical assaults by someone other than a spouse or parent was significantly older for women who reported experiencing physical assault (only) compared with women with a history of both physical and sexual assaults.

Table 3 presents a description of worst events according to trauma history. The majority of women in the three IPV groups selected a “confronted with trauma” rather than sexual or physical assault as their worst event. Just 21% with a history of physical assault only selected physical assault as worst and 24% with a history of sexual assault only selected sexual assault. Among women who experienced both physical and sexual assaults, 16% selected physical

assault and 26% selected sexual assault as their worst event.

Although not shown in Table 3, the percentage of worst events that met Criteria A1 and A2 for PTSD varied according to event type. Across all categories, 54% of physical assaults selected as a worst event met Criterion A; 30% of sexual assaults selected as a worst event met Criterion A; and 45% of other types of trauma selected as worst events met Criterion A. The percentage of events that met Criterion A also varied when “other types of trauma” was broken down into the categories of direct trauma (36%), witnessed trauma (46%), confronted trauma (47%), and other trauma not specified (56%).

The two most commonly endorsed worst events under the “confronted with” category were unexpected death of loved one ( $N = 940$ ; 29.14%) and serious illness/accident/injury of loved one ( $N = 960$ ; 28.87%). There were no significant differences between these groups in regard to meeting Criterion A: 44% and 50%, respectively.

Table 4 presents the prevalence of past-year and lifetime mental disorders according to trauma history. Past-year PTSD prevalence ranged from 2.6% in women with other traumas only to 9.2% in women with both physical and sexual assaults. Past-year

TABLE 2. Assault Characteristics of Sample

Characterization of Trauma Experience	Valid N	Age in Years at First Assault $\chi$ (SE)	Age in Years at Last Assault $\chi$ (SE)	Number of Assaults $\chi$ (SE)
PA <sup>a,b</sup>	260			
Attacked by parent or caretaker before age 18 years	59	9.03 (0.80)	14.17 (0.38)	34.40 (7.65)
Attacked by spouse or romantic partner	181	27.76 (1.00)	35.77 (1.27)	19.19 (2.69)
Attacked by someone else	40	38.44 (4.33)	39.91 (4.91)	7.38 (4.16)
SA <sup>b</sup>	129	12.76 (0.84)	14.25 (0.84)	5.16 (1.65)
PSA <sup>a,b</sup>	95			
Attacked by parent or caretaker before age 18 years	30	8.92 (0.85)	14.51 (0.52)	24.27 (7.26)
Attacked by spouse or romantic partner	68	29.28 (1.64)	37.18 (1.92)	24.80 (5.88)
Attacked by someone else	18	23.86 (2.68)	25.14 (2.82)	2.30 (0.93)
Sexual assault	95	16.87 (1.47)	22.19 (1.81)	9.18 (3.44)
Group Differences in Trauma Characteristics		$\chi^2$ (df) p	$\chi^2$ (df) p	$\chi^2$ (df) p
Attacked by parent or caretaker before age 18 years: PA vs. PSA		0.01 (1) 0.925	0.27 (1) 0.605	0.95 (1) 0.330
Attacked by spouse or romantic partner: PA vs. PSA		0.59 (1) 0.444	0.41 (1) 0.522	0.58 (1) 0.446
Attacked by someone else: PA vs. PSA		8.19 (1) 0.004	8.58 (1) 0.003	1.43 (1) 0.232
Sexual assault: PA vs. PSA		5.47 (1) 0.019	14.71 (1) 0.001	1.12 (1) 0.291

Notes: PA: physical assault; PSA: physical and sexual assaults; SA: sexual assault.

<sup>a</sup>Physical assault includes at least one of the following types of trauma: being beaten by parents/caretaker before age 18 years, being beaten by spouse/romantic partner, and being beaten by someone else.

<sup>b</sup>Participants may have experienced other trauma types in addition to physical and/or sexual assault.



TABLE 3. Distribution of Worst Events by Trauma Group

Trauma Selected as Worst Event	All Trauma Survivors N = 3,354	Characterization of Trauma Experience			
		Physical Assault N = 260	Sexual Assault N = 129	Both Physical and Sexual Assault N = 95	Other Trauma Only N = 2,870
Physical assault	62 (1.8)	47 (21.2)	—	15 (15.8)	—
Sexual assault	48 (1.6)	—	29 (24.2)	19 (26.1)	—
Other type of trauma	2,775 (96.7)	163 (78.9)	82 (75.8)	51 (58.1)	2,479 (100)
Direct trauma	528 (18.3)	23 (12.9)	8 (8.5)	8 (12.6)	489 (19.00)
Witnessed trauma	114 (4.0)	11 (8.3)	2 (3.5)	6 (11.5)	95 (3.66)
Confronted trauma	2,029 (74.1)	128 (78.6)	60 (75.6)	32 (69.8)	1,809 (73.88)
Another trauma not specified	104 (3.6)	1 (0.2)	12 (12.4)	5 (6.2)	86 (3.45)

Notes: Data are presented as N (%). Physical, sexual, and combined trauma groups include women who also experienced other traumas.

TABLE 4. Prevalence Estimates for Past Year and Lifetime PTSD and Comorbid Mood and Anxiety Disorders

Type of Trauma Exposure	PTSD Only	PTSD With Mood or Anxiety Disorder	Any Mood or Anxiety Disorder Without PTSD
Prevalence of past-year diagnoses: N (%)			
All trauma survivors	114 (3.1)	94 (3.0)	428 (12.4)
Physical assault	15 (4.7)	16 (7.6)	48 (19.8)
Sexual assault	11 (8.1)	3 (2.2)	3 (2.2)
Physical and sexual assaults	7 (9.2)	13 (11.9)	24 (20.3)
Other types of trauma only	81 (2.6)	62 (2.3)	337 (11.5)
Prevalence of lifetime diagnoses: N (%)			
All trauma survivors	107 (3.1)	223 (6.6)	956 (27.9)
Physical assault	15 (5.4)	41 (16.8)	91 (33.9)
Sexual assault	7 (3.6)	13 (10.4)	41 (34.9)
Physical and sexual assaults	5 (6.7)	20 (21.5)	37 (35.6)
Other types of trauma only	80 (2.7)	149 (5.2)	787 (26.9)

Notes: All trauma survivors (N = 3,354); physical assault (N = 260); sexual assault (N = 129); physical and sexual assaults (N = 95); other types of trauma only (N = 2,870). PTSD: posttraumatic stress disorders.

prevalence of comorbid PTSD and other anxiety or depressive disorders ranged from 2.2% in women with sexual assault to 11.9% in those with both physical and sexual assaults. Past-year prevalence of any mood or anxiety disorder without PTSD was particularly high in those with physical assault histories (19.8%) or those with both physical and sexual assaults (20.3%). Although a relatively small percentage of women with an IPV history meet criteria for lifetime PTSD, a significant minority meets criteria for comorbid PTSD and other anxiety or depressive disorders or any mood or anxiety disorder without PTSD.

As shown in Table 5, the odds of meeting criteria for past-year or lifetime mental disorder was elevated among women who experienced IPV relative to those who experienced other traumas only. For example, the odds of PTSD were three times

greater in women who reported sexual assault or physical and sexual assaults, rather than other traumas. The odds of meeting criteria for past-year comorbid PTSD or other anxiety and depressive disorders was three times greater if one had a physical assault and five times greater if one had both a physical and sexual assault, compared with women reporting “other traumas” only. Similarly, the odds of having any mood or anxiety disorder were higher in those with physical or combined physical and sexual assault, compared with women with other traumas.

## CONCLUSIONS

One of seven older women reported a lifetime IPV history: 7.0% reported physical assault, 3.6% reported

**TABLE 5. Odds That Particular Traumas Are Associated With Past-Year and Lifetime Outcomes Regardless of Worst Event**

Characterization of Trauma Experience	PTSD Only		PTSD With Another Mood or Anxiety Disorder		Any Mood or Anxiety Disorder Without PTSD	
	OR (95% CI)	t p	OR (95% CI)	t p	OR (95% CI)	t p
Past-year diagnoses <sup>a</sup>						
Physical assault	1.86 (0.95–3.66)	1.83 0.071	3.08 (1.58–5.98)	3.38 0.001	1.82 (1.21–2.74)	2.93 0.005
Sexual assault	3.35 (1.63–6.88)	3.35 0.001	1.01 (0.27–3.80)	0.02 0.988	1.58 (0.86–2.93)	1.49 0.140
Physical and sexual assaults	3.75 (1.62–8.69)	3.14 0.003	4.99 (2.29–10.88)	4.12 0.001	2.30 (1.19–4.43)	2.54 0.014
Other types of trauma only	1.00	NA	1.00	NA	1.00	NA
Lifetime diagnoses <sup>a</sup>						
Physical assault	2.37 (1.15–4.92)	2.37 0.021	3.89 (2.41–6.28)	5.66 0.001	1.67 (1.18–2.35)	2.97 0.004
Sexual assault	1.63 (0.66–4.05)	1.08 0.284	2.45 (1.21–4.97)	2.53 0.014	1.58 (0.94–2.65)	1.77 0.082
Physical and sexual assaults	3.56 (1.07–11.85)	2.11 0.039	5.57 (2.79–11.13)	4.96 0.001	1.94 (1.00–3.75)	2.00 0.050
Other types of trauma only	1.00	NA	1.00	NA	1.00	NA

Notes: Odds ratios are adjusted for current age, marital status, educational status, employment status, and household income. Race was not included as a covariate because small cell sizes led to model convergence problems. CI: confidence interval; OR: odds ratio; PTSD: post-traumatic stress disorder; NA: data not applicable/available.

<sup>a</sup>Outcomes were mutually exclusive and were modeled against the nonevent “no PTSD, mood, or anxiety disorders” in multinomial logistic regression modeling (generalized logit).

sexual assault, and 2.6% both physical and sexual assaults. Some of these women experienced repeated assaults throughout their lifetimes. A substantial portion with IPV histories met past-year and lifetime criteria for mental health disorders, including PTSD, other anxiety disorders, or depression. Past year prevalence of any mood or anxiety disorder was particularly high in older women with assault histories.

These findings are consistent with other investigations regarding the prevalence of physical and sexual assaults<sup>23</sup> and potential deleterious mental health effects of IPV in older women.<sup>8,24</sup> In fact, the literature also indicates that older women with histories of abuse may have increased odds of physical health problems, dementia, and early mortality.<sup>10,25,26</sup>

One quarter of the older women reporting IPV selected physical or sexual assault as their worst event; the majority selected “confronted with trauma.” While the majority of older women selecting “confronted with trauma” as their worst event supports NESARC findings that included older men,<sup>27</sup> these findings are contrary to data from representative samples of younger adults<sup>15</sup> and the high levels of subsequent pathology associated with particular events (e.g., rape).<sup>28,29</sup> Namely, utilizing epidemiological data from the National Comorbidity Study, individuals with physical and sexual assault histories were more likely to pick these events as most upsetting.<sup>15</sup> Reasons for the discrepancy are unclear.

Perhaps age and cohort-related issues may impact older women’s perceptions of their worst trauma. For instance, the death of a spouse could have serious emotional, logistical, and financial implications and thus be identified as the worst, even though it is less likely to meet the PTSD stressor criterion or result in elevated rates of PTSD.

There is ongoing debate regarding the diagnostic definition of the PTSD stressor criterion and normative events (e.g., age-appropriate death or illness of spouse) were never intended to be captured.<sup>30</sup> Historically, the stressor criterion of “unexpected death of a loved one” was supposed to encapsulate violent death through murder, assault, combat, or terrorist attack. As such it may be more appropriate to diagnose chronic adjustment disorder rather than PTSD if there are enduring emotional consequences when a spouse dies in a nonviolent way or becomes seriously ill in old age.

There was also a high prevalence of trauma in general in this nationally representative sample of older women. Indeed, over 75% reported experiencing a potentially traumatic event across their lifespan. These numbers are higher than some reports of lifetime trauma in younger women (51.2%;<sup>15</sup> 69%<sup>28</sup>) and 18–85 year olds (64.8%<sup>31</sup>). However, the rates are comparable with findings from more recent nationally representative studies (89.6% for both genders; age 18–45 years).<sup>32</sup> Differences are likely

due to the inclusion of a broader spectrum of traumatic events.

The current cohort of older women may be less likely to label IPV as such<sup>10,33</sup> and are not likely to disclose such histories to healthcare providers.<sup>9,34,35</sup> Older women seeking treatment with unexplained somatic symptoms, depression, and anxiety may have unresolved trauma-related problems that are contributing to their symptoms and thus in need of trauma-informed care.

Although the limited information on assessment of trauma and PTSD in older adults has been conducted primarily with combatants,<sup>34</sup> there are measures used by trauma professionals<sup>35</sup> that might be useful with this population. Providers should be proactive in initiating discussions regarding traumatic histories, including asking very behaviorally specific questions, and not rely on older patients to voluntarily disclose information. For more general information on trauma and PTSD assessment instruments, see <http://www.ptsd.va.gov/professional/pages/assessments/assessment.asp>. Further research is needed on PTSD measures in older women taking into account cohort issues in trauma descriptions. Subsequently, dissemination of well-validated instruments to assist providers in more accurate identification is necessary.

Among the healthcare professionals, a better understanding of the resources available to older traumatized women is necessary to make accurate referrals or conduct effective interventions. Unfortunately, to date, there are no randomized controlled trials currently published examining the efficacy of psychotherapy for PTSD in older women, and the current literature contains primarily descriptive applications of therapies.<sup>36</sup>

There is some indication of how older female trauma survivors may fare in evidence-based exposure therapies. In a randomized controlled trial of sexual assault survivors with PTSD, older women in the exposure condition had better outcomes than younger women.<sup>37</sup> This may be due to older adults' abstraction abilities and the need to complete numerous written assignments in the comparison condition, Cognitive Processing Therapy. It is important to note that the age range for this trial was 18 through 70 years, with the average age of 32 years. Thus, more research with larger numbers of those older than 65 years is needed to definitively indicate

the efficacy of evidence-based trauma processing therapies in older women. In the absence of empirical evidence, practitioners should be aware of the PTSD treatment literature, the uniqueness of working with older adults and proceed with sound clinical judgment and practicality.

Traumatic exposure and its effects typically receive relatively little or no attention in studies of adult development and aging. For example, relatively few studies<sup>38,39</sup> on depression or its treatment in older adults have addressed the influence of trauma. Findings here indicate this is an important area requiring further study as mood and anxiety disorders remain common.<sup>40</sup> It is also suspected that when gero-professionals give consideration to the consequences of trauma, they almost always equate them primarily or solely with PTSD. Thus, cross-fertilization seems needed in developing trauma and aging curriculum for use in medical and mental health training programs.

There are several study limitations. This investigation involves retrospective reporting of trauma. Thus, relationships between IPV and mental health cannot necessarily be viewed as causal. Findings may be inaccurate due to limitations of biased recall or reluctance to report. In addition, underreporting of trauma in older adults may be the result of using assessment measures that are not validated with this population. Diagnostic interviews were conducted by trained lay interviewers rather than licensed mental health providers. Furthermore, because of relatively few women meeting criteria for any current substance use disorder, the relationship between IPV and substance use disorders could not be examined. Lastly, the trauma measure included general descriptors rather than behavior-specific questions, and did not separately assess specific types of events (e.g., occurrences of other types of sexual assault) or critical incidents such as life threat, which may affect subsequent pathology rates.

In conclusion, the documentation in a national sample of the associations between IPV that occurred sometimes decades ago and past-year mental health disorders supports the notion that trauma should no longer remain a "hidden variable"<sup>41</sup> in the lives of older women. Relatedly as women from the "baby boomer" generation reach older adulthood, the



number of women who have experienced or acknowledged IPV and associated difficulties may increase and thus more services may be needed.

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