Early Life Sexual Trauma and Later Life Genitourinary Dysfunction and Functional Disability in Women

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BACKGROUND: Past research has examined the health outcomes of early sexual trauma in reproductive age women, but little is known about potential long-term effects in older age.

OBJECTIVE: To examine associations between early life sexual trauma and later life sexual/genitourinary dysfunction and general functional disability in women.

DESIGN: Cross-sectional analysis of nationally representative observational data from the National Social Life, Health, and Aging Project (2010–2011)

PARTICIPANTS: One thousand seven hundred forty-five US women aged ≥ 50 years

MAIN MEASURES: Two forms of early life sexual trauma (childhood sexual abuse and unwanted first sexual experience), sexual/genitourinary dysfunction (pain during sex, lack of pleasure during sex, urinary incontinence, other urinary symptoms), and general functional disability (difficulty performing 7 activities of daily living (ADLs) or 8 instrumental activities of daily living (IADLs)), assessed by interview and questionnaire.

KEY RESULTS: Of 1745 women, 11% reported a history of childhood sexual abuse and 39% an unwanted first sexual experience. Childhood sexual abuse was associated with later life sexual/genitourinary dysfunction (pain during sex [OR 1.9, 95% CI 1.1–3.3], other urinary problems [OR 1.9, 95% CI 1.2–3.1]), and difficulty with multiple ADLs/IADLs (walking across the room [OR 1.9, 95% CI 1.2–3.1], getting in or out of bed [OR 2.0, 95% CI 1.2–3.3], bathing [OR 2.0, 95% CI 1.2–3.5], prepping meals [OR 2.4, 95% CI 1.5–3.8], shopping for food [OR 1.6, 95% CI 1.0–2.4], and completing light work [OR 1.6, 95% CI 1.0–2.4]), after adjusting for age, race, and education. Unwanted first sexual experience was associated with later life lack of pleasure with sex (OR 1.7, 95% CI 1.1–2.5) and difficulty with ADLs/IADLs (walking one block [OR 1.5, 95% CI 1.1–2.1], completing light work [OR 1.6, 95% CI 1.1–2.1]) in adjusted analyses.

CONCLUSIONS: Early sexual trauma may be an under-recognized marker of risk of aging-related functional

decline in women. Findings underline the importance of providing trauma-informed care for women across the aging spectrum.

KEYWORDS: interpersonal trauma; genitourinary function; functional disability; elder abuse.

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INTRODUCTION

An estimated one in five US women has been raped during their lifetime, and at least two in five report being subjected to other forms of sexual violence.¹ Recent social movements such as #MeToo and #TimesUp have led to increased public awareness of sexual trauma experienced by women, highlighting problematic experiences that have not historically been discussed. In turn, this increased awareness has prompted more widespread investigation into the effects of sexual trauma or abuse on women's health and well-being.^{2, 3}

Women typically experience sexual trauma early in life, with the US Department of Justice reporting that a woman is most at risk of sexual assault at age 14.⁴ Since childhood and adolescence are psychologically and physically vulnerable times, early life sexual trauma or abuse may have uniquely powerful consequences on health. Past studies suggest that women who are victims of early sexual trauma may have more sexual and genitourinary problems or other general health conditions in their reproductive or midlife years.^{2, 5–7} They may also be more prone to revictimization later in life, including in older age.⁸ However, research on potential long-term consequences in older age is limited,^{9, 10} with prior studies focusing on specialized or referral populations or on mental health outcomes only.^{10–12} As such, little is known about potential associations between these early life exposures and a broader array of aging-related health outcomes, especially in more generalizable populations.

To address this gap, we examined the prevalence of two types of potentially traumatic early sexual experiences—childhood sexual abuse and an unwanted first sexual experience—and investigated associations with several forms of aging-related functional decline in a national sample of older women. To get a better sense of overlap of traumatic exposures between early

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life and later life, we also pursued an exploratory analysis examining associations between exposure to early sexual trauma and emotional abuse in older age. We aimed to provide new evidence to guide surveillance and care of aging women who have experienced early sexual trauma, as well as advance a broader perspective of sexual trauma that incorporates the entire lifespan.

METHODS

Study Population

We conducted a cross-sectional analysis of data from the second wave of the National Social Life, Health, and Aging Project (NSHAP), an observational cohort designed to investigate relationships between biological, social, and psychological factors and health outcomes in older community-dwelling US adults.¹³ Details about the sampling process and study design for NSHAP have been described elsewhere.¹⁴ Briefly, the first wave of NSHAP used multistage area probability sampling to assemble a nationally representative sample of US adults aged 57–85, oversampling in areas with higher densities of Latino and African American individuals. Wave 2 consisted of re-interviews with Wave 1 respondents 5 years later, individuals who had been eligible for Wave 1 but had not responded previously, and cohabiting partners or spouses.

For Wave 2, trained interviewers conducted study visits in participants' homes between August 2010 and May 2011 to pose questions surrounding sexual and social health, including sexual trauma. For sensitive questions, participants could opt to answer privately on a laptop or sealed questionnaire.¹⁵ For this investigation, we restricted our analytic sample to women at least 50 years of age who provided data about exposure to at least one form of early sexual trauma in NSHAP Wave 2. All participants provided informed consent before data collection, and all procedures were approved by the institutional review boards of the University of Chicago and the National Opinion Research Center.

Early Life Sexual Trauma Exposure Assessment

Early sexual trauma exposure was evaluated using structured, interviewer-administered questionnaire measures adapted from other large-scale studies.^{16–19} Childhood sexual abuse was assessed with a question from the National Health and Social Life Survey (1992): "Before you were 12 or 13 years old, did anyone touch you sexually?"; women responding yes were considered to have been exposed to childhood sexual abuse. Unwanted first sexual experience was assessed by asking women when they first had penetrative sexual intercourse [of sex], is this something you wanted at the time, went along with, or were forced into?"; for this study, participants were considered to have had an unwanted first sexual

experience if they "were forced into" or "went along with" that sexual experience as opposed to wanting it.

Sexual/Genitourinary Dysfunction Measures

Sexual problems in the past 12 months were assessed using interviewer-administered questionnaire measures adapted from the National Health and Social Life Survey²⁰, including trouble lubricating, not finding sex pleasurable, and experiencing physical pain during intercourse. Urinary symptoms were evaluated using structured questions adapted from other epidemiological studies of older women.^{21, 22} Urinary incontinence was assessed by asking, "In the past 12 months, have you had difficulty controlling your bladder, including leaking small amounts of urine, leaking when you cough or sneeze, or not being able to make it to the bathroom on time?" Other urinary symptoms were assessed by asking, "In the past 12 months, have you had other problems with urinating, such as incomplete emptying, a weak urinary stream, straining to begin urination, or difficulty in postponing urination?" If participants answered affirmatively to either question, they were asked to characterize how frequently symptoms occurred. Our analysis focused on urinary symptoms occurring at least a few times a month, consistent with previous NSHAP studies.^{23–25}

Functional Disability Measures

Functional disability was assessed using standardized questions assessing difficulty with completing each of seven activities of daily living (ADLs) (walking across room, walking one block, dressing, bathing or showering, eating, getting in or out of bed, and using the toilet) and eight instrumental activities of daily living (IADLs) (preparing meals, taking medications, managing money, shopping for groceries, performing light housework, using a telephone, driving the car during the day, and driving the car during the night). Answers were obtained using a 4-point Likert scale ("no difficulty," "some difficulty," "much difficulty," and "unable to do"). For this analysis, participants were considered to have meaningful difficulty if they reported at least "some difficulty" with the activity.

Emotional Abuse in Older Age

To evaluate for an overlap of traumatic exposures between early life and later life, current exposure to elder emotional abuse was assessed via a leave-behind questionnaire using two structured questions similar to items from validated screening tools for elder mistreatment.²⁶ This allowed participants to disclose information privately, rather than in the vicinity of other household members during in-person interviews conducted in participant homes. Participants were asked how often they felt "threatened or frightened" by (1) their partner or (2) another family member or one of their friends, with response options including "often," "some of the time," "hardly ever or rarely," or "never." For this analysis, women were

considered to be at risk of emotional abuse if they gave any response other than “never.” The NSHAP Wave 2 survey did not collect data on other lifetime experiences of sexual trauma.

Other Sociodemographic and Clinical Covariates

Additional interviewer-assessed characteristics to describe the cohort included age, self-identified race/ethnicity, education, marital status, earned annual household income (not including interest or dividends), current alcohol consumption, current cigarette consumption, sexual activity, and self-reported physical and mental health. Body mass index was calculated from weight and height measured during study visits. Parity was assessed via leave-behind questionnaire.

Statistical Analysis

Demographics and other characteristics of the sample were examined using weighted descriptive statistics. Subsequently, we developed multivariable logistic regression models to examine the odds of each type of sexual/genitourinary dysfunction predicted by each form of early sexual trauma. We also developed parallel models examining the odds of experiencing difficulty with each ADL and IADL associated with each form of early sexual trauma. All models were adjusted for age, race/ethnicity, and education as demographic covariates that might confound associations between early sexual trauma and later life functional decline.^{27, 28} In our main models, we did not adjust for later life health factors such as obesity, comorbidity, or health status that could represent downstream effects of early sexual trauma and directly mediate its effects on later life functional decline. However, in supplementary analyses, we additionally adjusted for obesity due to its known associations with both sexual trauma and later life functional impairment.^{29–31} We also created supplementary models examining associations between early sexual trauma and self-reported overall physical and mental health in older age. Finally, we developed regression models examining associations between early sexual trauma and current elder emotional abuse, again adjusting for age, race/ethnicity, and education.

All analyses were conducted using SAS 9.4 (SAS Institute, Inc., Cary, NC) using survey procedures (e.g., surveymeans, surveyfreq, and surveylogistic). Sampling weights were used to ensure correct calculation of the point estimates. As recommended by NSHAP, we used weight accounting for non-response by age and race.^{15, 32–34} Stratification and clustering statements were used to calculate standard errors and the corresponding tests of statistical significance.

RESULTS

Participant Characteristics

Of 2212 women in the second NSHAP wave, 368 were excluded from our analyses for age less than 50 years, and

another 81 were excluded for not having completed at least one question about exposure to early sexual trauma. In the remaining 1745 women, the mean age was 71.1 ± 0.3 years, and the majority were white (81%), married (56%), and college educated (58%). Over half had an annual household income level $\leq \$24,999$ (51%). The majority were overweight or obese (72%) and multiparous (82%). Current alcohol use was reported by 51% of women, while only 12% reported smoking tobacco. Two fifths (43%) of women self-reported very good or excellent physical health (Table 1).

Eleven percent of women reported exposure to childhood sexual abuse, and 39% reported an unwanted first sexual experience (Table 2). No substantial differences in these exposures were detected across age groups. The average age of women at the time of an unwanted first sexual encounter was

Table 1 Demographics and Clinical Characteristics of the Study Participants

Characteristics	Women* (N = 1745)
Age	
Mean age in years	71.1 (± 0.26)
Less than 65 years, n (%)	350 (23.5)
65 to 74 years, n (%)	751 (43.9)
75 years or older, n (%)	644 (32.7)
Race/ethnicity [†] , n (%)	
White	1229 (81.4)
Black	286 (9.7)
Hispanic, non-black	186 (6.7)
Other	36 (2.2)
Educational level, n (%)	
Less than high school	324 (15.4)
High school or equivalent	457 (26.7)
Some college/associate degree/vocational certification	608 (37.1)
Bachelor's degree or beyond	356 (20.7)
Marital/partner status, n (%)	
Married	1028 (55.8)
Parity [‡] , n (%)	
Nulliparous	106 (7.4)
Primiparous	160 (11.2)
Multiparous	1192 (81.5)
Household earned income [‡] , n (%)	
$\leq \$24,999$	940 (51.0)
\$25,000–\$49,999	326 (19.6)
\$49,999–\$99,999	339 (21.7)
$\geq \$100,000$	112 (7.6)
Body mass index (BMI) [‡] , n (%)	
Underweight (BMI < 20)	66 (3.6)
Normal weight (BMI ≥ 20 but < 25)	363 (24.2)
Overweight (BMI ≥ 25 but < 30)	579 (34.4)
Obese (BMI ≥ 30)	650 (37.8)
Health-related habits, n (%)	
Currently drink alcohol	840 (50.5)
Currently smoke tobacco	192 (12.1)
Sexual activity, n (%)	
Sexually active in last 3 months	555 (31.6)
Self-reported physical health [‡] , n (%)	
Excellent or very good	705 (42.5)
Good	592 (34.6)
Fair or poor	444 (22.9)
Self-reported mental health [‡] , n (%)	
Excellent or very good	951 (56.2)
Good	551 (31.5)
Fair or poor	242 (12.3)

*Data are presented as weighted mean ($\pm$ standard deviation) or as absolute number plus weighted percentage

[†]Data were missing for 8 women for race/ethnicity, 287 women for parity, 28 women for household income, 87 women for BMI, 4 women for self-reported physical health, and 1 woman for self-reported mental health

Table 2 Prevalence of Exposure to Early Life Sexual Trauma by Age Group

Early life sexual trauma exposure	Women by age group* (N = 1745)			
	All women, n (%)	Women aged 50–<65 years, n (%)	Women aged 65–<75 years, n (%)	Women aged >75 years and older, n (%)
Childhood sexual abuse [†]	183 (11.4)	45 (13.7)	89 (12.4)	49 (8.5)
Unwanted first sexual experience [‡]	684 (39.2)	142 (42.9)	276 (35.8)	266 (41.1)

*Data are presented as absolute number plus weighted percentage

[†]Childhood sexual abuse was defined as someone sexually touching the respondent before the ages of 12 years old or 13 years old

[‡]Unwanted first sexual experience was defined as respondent indicating they were “forced into” or “went along with” their first sexual experience, rather than wanting this experience

18.0 (±0.2) years, compared to 20.0 (±0.2) years for women who had a wanted first sexual encounter ($p < 0.01$).

Of 1745 women, 158 (10%) experienced pain during sex, 348 (26%) had trouble lubricating, and 244 (17%) did not find sex pleasurable. In addition, 661 (41%) reported urinary incontinence, and 280 (17%) reported other urinary symptoms at least a few times a month. Further, 635 (35%) of women reported difficulty with at least one type of ADL and 996 (54%) reported difficulty with at least one type of IADL.

Associations Between Early Life Sexual Trauma Exposures and Later Life Functional Outcomes

In models adjusted for age, race/ethnicity, and education, women with a history of childhood sexual abuse had increased odds of reporting pain during sexual intercourse (OR 1.92, 95% CI

1.12–3.27) as well as other urinary problems (OR 1.91, 95% CI 1.17–3.10). Women with a history of unwanted first sexual experience had increased odds of reporting lack of pleasure during intercourse (OR 1.66, 95% CI 1.13–2.45). No significant associations were seen between these exposures and other measures of sexual/genitourinary dysfunction (Table 3).

In multivariate analyses, women who experienced childhood sexual abuse had increased odds of experiencing difficulty with ADLs like walking across the room (OR 1.94, 95% CI 1.22–3.10), getting in or out of bed (OR 2.01, 95% CI 1.24–3.27), and bathing (OR 2.02, 95% CI 1.15–3.53). In addition, women with a history of childhood sexual abuse had increased odds of reporting difficulty with IADLs such as prepping meals (OR 2.36, 95% CI 1.47–3.79), shopping for food (OR 1.58, 95% CI 1.04–2.40), and completing light work (OR 1.57, 95% CI 1.01–2.42). Women with a history of an unwanted first sexual experience had increased odds of reporting difficulty with walking one block (OR 1.50, 95% CI 1.07–2.09) and completing light work (OR 1.55, 95% CI 1.13–2.12), but no other ADLs or IADLs, in adjusted analyses (Table 4).

After additional adjustment for obesity, most associations between sexual trauma exposures and functional outcomes remained significant, suggesting they were independent of obesity (Appendix Tables 1 and 2).

In supplementary analyses, women with a history of childhood sexual abuse had increased odds of reporting fair/poor mental health, but not physical health (Appendix Table 3).

Associations Between Early Life Sexual Trauma Exposures and Emotional Abuse in Older Age

Of 1745 women, 1532 returned leave-behind questionnaires, including 1515 who provided data about emotional abuse status. Of this sample, 123 (12%) reported ever feeling threatened or frightened by their current partners, and 169 (12%)

Table 3 Adjusted Associations Between Early Life Sexual Trauma Exposures and Sexual/Genitourinary Dysfunction in Older Age

Type of sexual or genitourinary dysfunction	Childhood sexual abuse			Unwanted first sexual experience		
	Women without a history of childhood sexual abuse (N = 1562), n (%)	Women with a history of childhood sexual abuse (N = 183), n (%)	Adjusted odds ratio* (95% confidence interval)	Women without a history of unwanted first sexual experience (N = 1061), n (%)	Experienced unwanted first sexual experience (N = 684), n (%)	Adjusted odds ratio* (95% confidence interval)
Trouble lubricating [†]	290 (24.3)	58 (39.9)	1.82 (0.98–3.39)	215 (27.4)	133 (24.5)	0.90 (0.65–1.24)
Pain during sexual intercourse [†]	132 (9.2)	26 (17.2)	1.92 (1.12–3.27) [‡]	92 (9.9)	66 (10.6)	1.13 (0.74–1.73)
Lack of pleasure during intercourse [†]	211 (16.0)	33 (21.6)	1.40 (0.84–2.34)	126 (14.1)	118 (20.9)	1.66 (1.13–2.45) [‡]
Urinary incontinence [†]	575 (40.4)	86 (45.2)	1.21 (0.78–1.88)	394 (40.1)	267 (42.3)	1.14 (0.86–1.51)
Other urinary problems [†]	234 (16.1)	46 (27.0)	1.91 (1.17–3.10) [‡]	163 (16.8)	117 (18.2)	1.15 (0.81–1.62)

All %s are column %s

*Adjusting for age, race/ethnicity, and education

[†]Data were missing for 378 women for trouble lubricating, 304 women for pain during sex, 376 women for did not find sex pleasurable, 121 women for urinary incontinence, and 98 women for other urinary symptoms

[‡]Significant at $p < 0.05$

Table 4 Adjusted Associations Between Early Life Sexual Trauma Exposures and General Functional Disability in Older Age

Functional disability outcomes	Women without a history of childhood sexual abuse (N = 1562), n (%)	Women with a history of childhood sexual abuse (N = 183), n (%)	Adjusted odds ratio* (95% CI)	Women without a history of unwanted first sexual experience (N = 1061), n (%)	Women with a history of unwanted first sexual experience (N = 684), n (%)	Adjusted odds ratio* (95% CI)
Activities of daily living						
Difficulty walking across room	218 (12.7)	36 (18.9)	1.94 (1.22–3.10) [†]	134 (12.0)	120 (15.6)	1.33 (0.94–1.88)
Difficulty walking 1 block [‡]	441 (27.4)	52 (26.0)	1.05 (0.61–1.79)	267 (24.0)	226 (32.3)	1.50 (1.07–2.09) [†]
Difficulty using toilet	166 (10.2)	31 (14.8)	1.67 (0.95–2.95)	103 (9.1)	94 (13.3)	1.52 (0.91–2.53)
Difficulty getting in or out of bed [‡]	149 (9.4)	29 (16.4)	2.01 (1.24–3.27) [†]	95 (8.8)	83 (12.4)	1.46 (0.93–2.30)
Difficulty dressing	213 (12.7)	34 (16.0)	1.51 (1.00–2.28)	134 (11.5)	113 (15.4)	1.38 (0.97–1.98)
Difficulty bathing	155 (9.0)	27 (14.5)	2.02 (1.15–3.53) [†]	99 (8.5)	83 (11.5)	1.40 (0.93–2.09)
Difficulty eating	63 (3.7)	10 (5.9)	1.84 (0.86–3.95)	45 (3.9)	28 (4.0)	1.02 (0.59–1.76)
Instrumental activities of daily living						
Difficulty prepping meal [‡]	209 (12.3)	43 (21.3)	2.36 (1.47–3.79) [†]	132 (11.7)	120 (15.8)	1.38 (0.98–1.94)
Difficulty taking meds [‡]	78 (4.5)	11 (5.8)	1.48 (0.75–2.94)	47 (4.0)	42 (5.8)	1.34 (0.77–2.32)
Difficulty managing money [‡]	130 (7.5)	19 (8.8)	1.36 (0.79–2.34)	81 (6.9)	68 (8.9)	1.26 (0.87–1.83)
Difficulty shopping for food [‡]	217 (13.3)	36 (17.3)	1.58 (1.04–2.40) [†]	136 (11.9)	117 (16.7)	1.46 (0.99–2.14)
Difficulty completing light work [‡]	299 (17.8)	46 (23.2)	1.57 (1.01–2.42) [†]	176 (15.6)	169 (22.6)	1.55 (1.13–2.12) [†]
Difficulty using telephone	53 (3.3)	10 (5.3)	1.80 (0.77–4.16)	44 (3.6)	19 (3.4)	0.88 (0.43–1.79)
Difficulty driving in day [‡]	197 (11.8)	29 (13.2)	1.58 (0.89–2.79)	122 (10.3)	104 (14.5)	1.39 (0.90–2.14)
Difficulty driving at night [‡]	599 (41.1)	86 (45.5)	1.35 (0.88–2.07)	403 (40.0)	282 (44.1)	1.13 (0.82–1.56)

All %s are column %s

*Adjusting for age, race/ethnicity, and education

[†]Significant at $p < 0.05$

[‡]Data were missing for 9 women for difficulty walking one block, 1 woman for difficulty getting out of bed, 2 women for difficulty prepping meal, 12 women for difficulty taking meds, 23 women for difficulty managing money, 6 women for difficulty shopping for food, 4 women for difficulty completing light work, 148 women for difficulty driving in day, and 186 women for difficulty driving at night

reported ever feeling threatened or frightened by their family or friends. Overall, 248 (25%) of respondents reported potential emotional abuse from either their partner, family, or friends.

In adjusted models, women with a history of childhood sexual abuse had increased odds of reporting current emotional abuse by family or friends (OR 2.31, 95% CI 1.39–3.83) and by their partner (OR 1.86, 95% CI 1.03–3.34). No significant associations were detected between unwanted first sexual experience and emotional abuse in older age (Table 5).

DISCUSSION

In this nationally representative sample of community-dwelling older women, one in ten women reported

experiencing childhood sexual abuse, while four in ten reported an unwanted first sexual experience. Accounting for established demographic risk factors for functional decline established in previous research, women with a history of childhood sexual abuse were more likely to experience pain during sexual intercourse, other urinary problems, and difficulty with multiple ADLs and IADLs in older age. Women with a history of unwanted first sexual experience were also more likely to report lacking pleasure during sex and difficulty with some ADLs/IADLs in older age. Our findings suggest that early sexual trauma may be an under-recognized marker of risk of genitourinary problems as well as general functional decline in older age, suggesting potential long-term consequences on older women's health and well-being.

Although prior studies have documented adverse health effects of childhood sexual abuse,^{2, 5, 6, 35, 36} few have

Table 5 Adjusted Odds of Emotional Abuse in Older Age with Exposure to Early Life Sexual Trauma

	Women without a history of childhood sexual abuse (N = 1562), n (%)	Women with a history of childhood sexual abuse (N = 183), n (%)	Adjusted odds ratio* (95% confidence interval)	Women without a history of unwanted first sexual experience (N = 1061), n (%)	Women with a history of unwanted first sexual experience (N = 684), n (%)	Adjusted odds ratio* (95% confidence interval)
Emotional abuse by family or friends [†]	139 (10.4)	30 (20.0)	2.31 (1.39–3.83) [‡]	98 (11.1)	71 (12.0)	1.03 (0.66–1.62)
Emotional abuse by partner [†]	104 (10.9)	19 (17.8)	1.86 (1.03–3.34) [‡]	74 (12.1)	49 (11.4)	0.93 (0.61–1.42)
Emotional abuse by family, partner, or friends	207 (23.1)	41 (33.9)	1.85 (1.19–2.86) [‡]	144 (23.7)	104 (25.8)	1.09 (0.79–1.51)

All %s are column %s

*Adjusting for age, race/ethnicity, and education

[†]Data were missing for 807 women for emotional abuse by partner and 230 women for emotional abuse by family or friends

[‡]Significant at $p < 0.05$

specifically examined associations between this abuse and later life health outcomes, with the majority of these investigating psychological rather than physical health outcomes. A prior survey in the UK found that a history of childhood sexual abuse was associated with mixed anxiety and depression, generalized anxiety disorder, phobia, posttraumatic stress disorder, and suicidal ideation in men and women older than 50 years.¹¹ In a longitudinal study of older adults in Ireland, childhood sexual abuse was associated with depression and anxiety in later life, in addition to conditions related to hypothalamic-pituitary-adrenal axis dysfunction including cardiovascular, gastrointestinal, and pain disorders.¹² Another study examining an older psychiatric population linked severe childhood sexual abuse with increased cumulative medical illness burden and overall ADL and IADL impairment, but without distinguishing between types of ADLs or IADLs.¹⁰

Even fewer studies have investigated the potential long-term health consequences of an unwanted or forced first sexual experience in women. A recent large-scale analysis of US women found that forced sexual initiation was associated with increased rates of pelvic inflammatory disease, ovulatory/menstrual problems, and worse self-reported health, but analyses were confined to the reproductive years.²⁴ Another cross-sectional analysis in Ireland found that both forced and “persuaded” sexual initiation were associated with worse measures of self-reported psychological and physical health, again focusing on women’s reproductive years.^{37, 38} To our knowledge, no prior studies have examined forced or coerced sexual initiation in relation to persistent health outcomes in older women.

Given the cross-sectional nature of our study, we cannot draw firm conclusions about causality or fully investigate the complex interplay between early life adversity and later life disability. However, our findings raise the possibility that early sexual trauma exposures can have lifelong health consequences. In particular, these findings are consistent with prior

literature⁷ suggesting that early life exposures may place women on a trajectory towards increased risk of impairment in older age. Although preliminary, these insights provide additional incentive for healthcare providers to assess patients’ past exposure to sexual abuse irrespective of current age. Early detection may help clinicians gauge female patients’ risk of functional, genitourinary, or sexual decline later in life; aid in prevention; and allow for delivery of trauma-informed care. This may include efforts to help patients understand and address the effects of trauma on their health, as well as to facilitate connection to trauma-specific services that may help mitigate these health consequences.³⁹

Our results also add to a growing body of evidence pointing to the potential overlap between exposure to early sexual trauma and other forms of later life abuse. A recent retrospective cohort study of older adults in Wisconsin found that early life victimization, including childhood sexual abuse, was associated with increased risk of elder victimization, although without distinguishing between different forms of elder abuse.⁸ A cross-sectional analysis of older Chinese-American adults found that a history of child maltreatment, including sexual abuse, was associated with twofold higher odds of elder abuse.⁴⁰ Combined with these earlier findings, our results provide increased evidence of the interconnectedness of abuse across the lifespan.

This study benefits from a large, nationally representative sample of community-dwelling older women, examination of a diversity of outcomes relevant to aging-related function, and assessment of potential re-exposure of women to a different form of abuse in older age. However, several limitations should be noted. For childhood abuse, participants were not asked to quantify their experiences of sexual touching or age at first abuse. Although prior literature has shown a dose-dependent link between early sexual trauma and sexual revictimization in adulthood,⁴¹ this study did not evaluate additional forms of elder victimization beyond emotional

abuse, or gather data surrounding revictimizations earlier in life. Due to the stigma surrounding sensitive topics such as abuse, early sexual trauma may also have been underreported by participants. With greater public discourse surrounding sexual trauma in the post-#MeToo era, future studies may reveal higher rates of acknowledged sexual trauma in women. Finally, given that this study examined numerous outcomes, there is potential that some associations may have appeared significant by chance.

CONCLUSION

In summary, our study identified associations between potentially traumatic early life sexual experiences and multiple forms of aging-related functional decline in a national sample of older community-dwelling women. Women with a history of early sexual trauma were also more likely to report emotional abuse later in life. These findings underline the importance of recognizing early sexual trauma as a potential lifelong risk factor for adverse health outcomes and other forms of victimization in older age, in order to guide trauma-informed care to women throughout the lifespan.

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