

Strangulation during sexual assault predicts increased posttraumatic stress symptoms six weeks after assault

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Introduction

- Worldwide, an estimated 10–27% of women are sexually assaulted during their lifetime.¹
- Data from a previous pilot study indicate that acute and chronic musculoskeletal pain, and other adverse health outcomes, are common after sexual assault.^{2,3}
- Sexual assault (SA) is associated with higher prevalence of posttraumatic stress symptoms in women than other forms of trauma; however, to date, few studies have evaluated assault characteristics associated with posttraumatic stress (PTS)⁴.

Methods

- Data for this analysis came from the ongoing Women's Health Study (R01 AR064700), the first large-scale, multisite prospective study of sexual assault survivors.
- When a potentially eligible adult woman sexual assault survivor ≥ 18 years of age presents to a network study site ("Better Tomorrow Network", Figure 1) to receive care from a sexual assault nurse examiner (SANE), a research assistant (RA) is paged.
- The RA approaches the survivor for consent to contact the participant in 48-72 hours, collect blood samples, and access medical records. These records include SANE detailed forensic records regarding the assault history and medical services provided to the patient.
- Follow-up evaluation of enrolled participants is performed at 1 week, 6 weeks, 6 months, and 1 year. These evaluations include an assessment of PTS symptoms (PCL-S), anxiety symptoms (PROMIS), and somatic symptoms (0-10 NRS).
- Substantial PT symptoms* were defined by a PCL-S score of ≥ 30.
- Strangulation* was defined as application of external pressure on the neck either by bare hands, a ligature, or other material.
- Multiple forms of assault* was defined as two or more of the following methods of penetration: penile-vaginal, penile-anal, penile-oral, oral-vaginal, digital, and/or foreign object.
- Drug facilitated sexual assault (DFSA)* was defined as sexual assault after the patient became incapacitated due to having consumed alcohol and/or drugs or been intentionally administered another date rape drug.

Table 1. Sexual Assault Survivor Characteristics (n=228)

Age, mean (SD)	28 (10)
Ethnicity, n (%)	
African American	34 (15)
European American	126 (55)
Multi-ethnic/other	68 (30)
Highest level of education completed, n (%)	
High school or less	75 (33)
Some college or other training	110 (48)
College grad or post-grad	43 (19)
Relationship status, n (%)	
Not in a serious relationship	132 (58)
Serious relationship	54 (24)
Separated/Divorced/Widowed	42 (18)
Number of children, n (%)	
None	126 (55)
1-2	70 (31)
3 or more	32 (14)

Table 2. PTS scores at 6 weeks according to selected assault-related and participant characteristics

Characteristic	Prevalence (%)	Mean (SD) PCL-S Score in those with characteristic present vs. absent	t value	p value
Threat of physical injury to the patient or patient's loved one	21%	51 (19) vs. 51 (18)	-0.06	0.95
Possession of weapon	16%	54 (18) vs. 50 (18)	-0.9	0.37
Assailant known (includes relative)	72%	52 (18) vs. 51 (17)	-0.28	0.78
Strangulation reported	28%	59 (15) vs. 49 (18)	-3.15	0.002
Multiple Assailants	9%	57 (17) vs. 51 (18)	-1.03	0.31
Penile-Vaginal Penetration	92%	52 (18) vs. 51 (21)	-0.06	0.95
Multiple forms of assault	76%	52 (18) vs. 46 (19)	-1.32	0.19
Drug facilitated	35%	51 (16) vs. 52 (18)	0.15	0.88
European American	62%	54 (17) vs. 47 (18)	-2.29	0.02
Hispanic	28%	55 (16) vs. 50 (18)	-1.82	0.07
>30 years of age	27%	52 (21) vs. 51 (16)	-0.3	0.76
Earn > \$20,000 annually	56%	50 (16) vs. 54 (19)	1.3	0.2
Post-High School Education or higher	93%	51 (17) vs. 56 (22)	1.0	0.32

*The prevalence of these assault characteristics exclude "don't know" responses and are presented out of the total number of Y/N responses received.

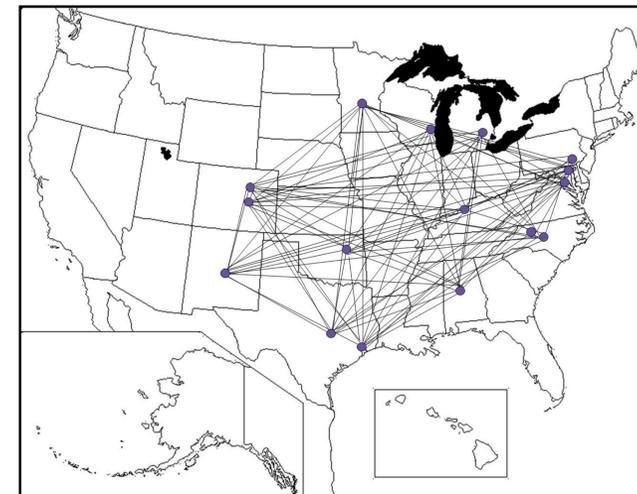


Figure 1. Better Tomorrow Network

Week 6 PCL Score

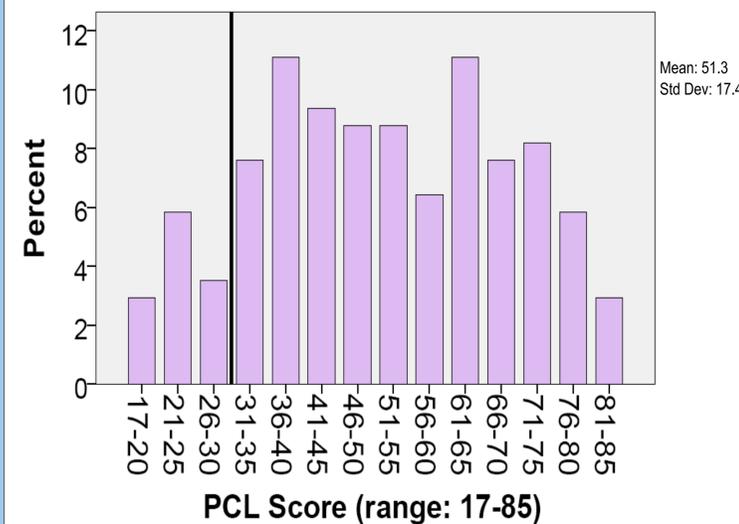


Figure 2. Distribution of PTS severity in sample at 6 weeks (n=165)

"My day to day life has changed. I no longer feel comfortable doing things I once did. Such as hanging out with friends and doing normal things. I now just prefer to be alone."

"I rarely personally feel clean, even after dozens of showers."

"I've been trying to avoid anything related to the assault, at the same time I felt less sensitive to any emotions, either good ones or bad ones."

"My life was changed forever. I will never be the same person no matter how hard I try."

Figure 3. Example participant qualitative comments

Results

- Characteristics of initial participants enrolled are shown in Table 1.
- Posttraumatic stress symptoms were universal 6 weeks after sexual assault; with 150/181 (83%) women meeting criteria for substantial posttraumatic stress symptoms.
- Strangulation during assault and European American ethnicity (vs. other) predicted greater posttraumatic stress symptoms at six weeks (Table 2).
- Strangulation during assault was also associated with more severe anxiety symptoms [27 (8) vs. 22 (10), $p < 0.05$] and a greater number of worsening somatic symptoms [7 (3) vs. 5 (4), $p < 0.05$].
- Example qualitative comments from enrolled participants are shown in Figure 3.

Conclusion

- In general, among SA survivors there was little association between posttraumatic stress symptom severity at 6 weeks and the presence or absence of specific assault-related characteristics. This may in part be due to the high burden of posttraumatic stress symptoms among all survivors.
- Strangulation-associated sexual assault, but not other sexual assault-related characteristics, predicted increased posttraumatic stress, anxiety, and worsening somatic symptoms 6 weeks after assault.
- Further analyses will evaluate the association between assault characteristics and outcomes in the full cohort at later time points.

References

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