Clinically Significant New or Worsening Pain is Common Six Weeks after Sexual Assault: Results of a Large-Scale Cohort Study

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INTRODUCTION

- Sexual assault (SA) is common and associated with a variety of negative outcomes[1,2]
- The incidence and causes of acute and persistent pain after SA remain poorly understood.[3]
- We evaluated the severity and distribution of pain in the immediate aftermath of SA, and one and six weeks after SA, using data from the first large-scale prospective study of SA survivors recruited in the immediate aftermath of assault.

MATERIALS AND METHODS

- Women who presented for emergency care after SA at one of the 13 SA care centers in our national SA survivor research network (Better Tomorrow Network, Figure 1) were enrolled.
- When a woman SA survivor ≥ 18 years of age presented to receive emergency care from a sexual assault nurse examiner (SANE), an on-call research associate (RA) was paged.
- The RA approached the survivor for initial study consent, including permission to contact her in 48-72 hours and access medical records regarding the assault.
- Full study consent occurred at 1 week follow-up. Web-based follow-up survey assessments were completed at 1 and 6 weeks.
- Follow-up survey assessments included evaluation of pain severity (0-10 pain numeric rating scale (NRS)) and location (adapted version of the Regional Pain Scale (RPS).

RESULTS

- Most study participants (*n* = 549, mean age 28) had high school education (57%).
- One quarter of study participants were Hispanic, racial distribution included White (65%), Black (16%), Native American (11%) and Asian (3%).

Table 1. Prevalence and severity of pain following sexual assault at each timepoint

	Initial		Week 1		Week 6	
Pain outcomes (mean, *SD*)						
Overall pain (0-10 scale)	5.25	(2.80)	4.41	(2.90)	3.17	(2.87)
Number of body regions with pain	8.24	(6.25)	8.04	(6.75)	5.02	(6.09)
Number of body regions with clinically significant new or worsening pain (Δ ≥ 2)	6.20	(5.53)	3.57	(4.24)	1.83	(3.10)
Prevalence of generalized pain and new/worsening pain (*n*, %)						
Generalized pain	214	39%	182	33%	75	16%
Clinically significant new/worsening pain (Δ ≥ 2)	483	89%	417	76%	251	54%
Severity of clinically significant new or worsening pain (*n*, %)						
Mild Pain (1-3)	119	23%	144	31%	124	39%
Moderate Pain (4-6)	195	38%	168	37%	130	40%
Severe Pain (7-10)	199	39%	148	32%	67	21%

Note: *SD* = standard deviation; Δ = change; n = number of participants, generalized pain refers to pain present in 4/5 body regions: left-lower, right-lower, left-upper, right-upper, and axial.

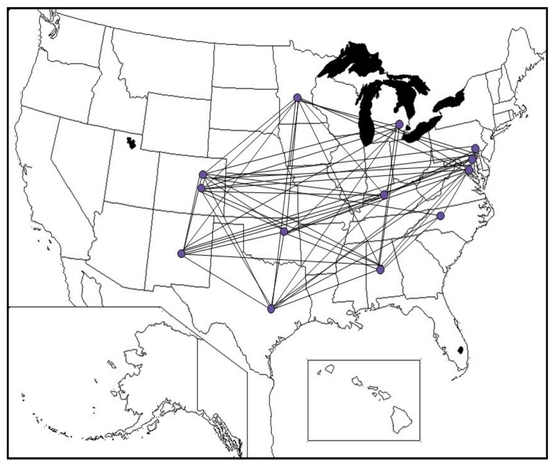

Figure 1.
Better Tomorrow Network

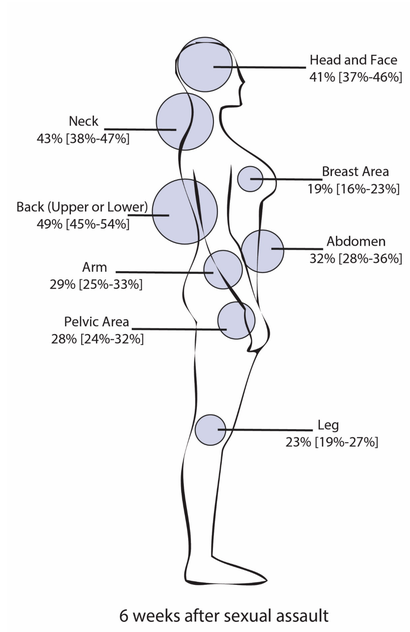

Figure 2. Prevalence of CSNWP six weeks post-sexual assault

Note: CSNWP = Clinically significant new or worsening pain, defined as change ≥ 2 on a 0-10 pain numeric rating scale. Parentheticals denote 95% Confidence Intervals.

RESULTS

- Nearly 9 out of 10 women SA survivors had clinically significant new or worsening pain in the immediate aftermath of SA. (Table 1). Most still had pain at six weeks, and nearly 1 in 6 had persistent generalized pain six weeks after SA.
- Most clinically significant new or worsening pain was moderate or severe in severity.
- Most women reported pain in many body regions, with a mean of 8 (*SD* = 6) regions with pain at the time of initial exam, 8 (*SD* = 7) at one week, and 5 (*SD* = 6) at six week follow-up (see Table 1).
- The most common locations of clinically significant new or worsening pain 6 weeks after assault were in the back, neck, and head regions (Figure 2).

CONCLUSIONS

- Pain is a common adverse outcome after SA.
- Pain after SA can occur throughout the body, and is most common in the axial region.
- Risk assessment methods and preventive interventions have been developed to prevent pregnancy and infection after SA. Similar methods and interventions are needed to prevent chronic pain after SA.

REFERENCES

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FUNDING

This research was supported by the National Institute of Arthritis and Musculoskeletal and Skin Diseases of the National Institutes of Health under Award Number R01 AR064700. The content is solely the responsibility of the authors and does not necessarily represent the official views of NIH.