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Exploring Relations Among Traumatic, Posttraumatic, and Physical Pain Experiences in Methadone-Maintained Patients

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Abstract: Differences in lifetime trauma exposure and screened symptoms of posttraumatic stress disorder (PTSD) were examined in methadone maintenance treatment (MMT) patients with a variety of pain experiences. Parametric and nonparametric statistical tests were performed on data obtained from 150 patients currently enrolled in MMT. In comparison to MMT patients reporting no pain in the previous week, those with chronic severe pain (CSP) (ie, pain lasting at least 6 months with moderate to severe pain intensity or significant pain interference) exhibited comparable levels of trauma involving sexual assault but reported significantly higher levels of trauma involving physical assault, number of traumatic events, and screened symptoms of PTSD. A third group, non-CSP MMT patients reporting some pain in the past week, differed significantly from the CSP group on number of traumatic events but reported comparable levels of sexual assault and physical assault. In comparison to men, women reported higher levels of sexual assault and were more likely to score above the cutoff on the PTSD screener but reported comparable levels of physical assault and number of traumatic events. Pain-related differences in trauma and screened symptoms of PTSD exist in MMT patients and may have implications for program planning and outreach efforts.

***Perspective:** This article demonstrates that trauma and screened symptoms of PTSD vary as a function of sex and pain status in methadone-maintained patients. Future studies may benefit from developing and assessing interventions that address chronic pain, PTSD, and opioid dependence in MMT.*

***Key words:** Pain, methadone, opioid-related disorders, trauma, PTSD.*

Exposure to trauma is common among individuals with substance use disorders (SUDs), particularly among those with opioid-related disorders, and is associated with elevated rates of posttraumatic stress disorder (PTSD).[10,22] Lifetime prevalence estimates of PTSD among patients in methadone maintenance treatment (MMT) exceed those for the general population and vary from 14 to 41%.[6,15,17,19,20,34] Although MMT patients with and without PTSD demonstrate comparable rates of treatment retention,[15] those with PTSD are more likely to exhibit psychopathology and polysubstance use 3 months after treatment admission.[6,15,34]

Investigations among different clinical populations have also demonstrated that trauma and PTSD are associated with chronic pain, that is, pain lasting at least 6 months.[2,9,26,31,33,35] Prevalence estimates of chronic pain in MMT exceed those for the general population and range from 37% with chronic severe pain to more than 60% with chronic pain of any intensity.[16,30] Although the importance of diagnosing and treating PTSD in SUD treatment settings has been emphasized,[11,23] the extent to which MMT patients with and without chronic pain differ on lifetime trauma exposure and current PTSD symptoms is unclear.

An improved understanding of lifetime trauma exposure and PTSD symptoms among methadone-maintained patients with a variety of pain experiences could help resource and program planning for MMT

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programs. Recent studies have highlighted the importance of assessing 3 varieties of pain among patients in SUD treatment, namely chronic severe pain (CSP) (ie, pain lasting at least 6 months with moderate to severe pain intensity or significant pain interference), "some pain" (ie, pain experienced in the previous week but not CSP), and "no pain" (ie, no pain reported in the past week and no CSP).[32] Consequently, the present study compared trauma and screened symptoms of PTSD among MMT patients with chronic severe pain, some pain, and no pain.

We previously reported on the prevalence (and psychiatric and substance use correlates) of these 3 pain groups in MMT: In comparison to the no pain group, the CSP group exhibited higher levels of depression, anxiety, somatization, overall psychiatric distress, and personality disorder criteria, and the 3 pain groups reported comparable rates of alcohol and tobacco use; illegal drug use (cannabis, cocaine, and heroin); and nonmedical use of prescription drugs (opioids, amphetamines, and benzodiazepines).[3] However, we did not report on (a) the association between trauma, PTSD, and substance use, or (b) pain groups' trauma exposure or PTSD screening totals.

Because chronic pain status is associated with exposure to trauma and PTSD symptoms,[2,9,31] we hypothesized that, in comparison to patients without pain, those with CSP would exhibit higher levels of lifetime trauma exposure (ie, physical assault, sexual assault, total number of traumatic events) and screened symptoms of PTSD. Whereas research studies on opioid dependent patients have generally found a higher prevalence of exposure to sexual assault among women as compared with men, the association between sex and prevalence of exposure to physical assault is less robust.[6,20,27] We hypothesized that female participants enrolled in MMT would exhibit higher levels of lifetime trauma exposure involving sexual assault and male participants would exhibit higher levels of lifetime trauma exposure involving physical assault. We did not advance a sex hypothesis regarding pain status in the current study because we have previously noted that the 3 pain groups did not differ significantly on sex composition.[3] Given previous findings regarding sex differences in susceptibility to PTSD, we hypothesized that women in MMT would be more likely than men to exhibit screened symptoms of PTSD.[4,12,20] Finally, we examined the association between trauma, PTSD, and substance use.

Materials and Methods

Participants

Participants were 150 MMT patients (85 men and 65 women) ages 19 to 61 years (mean, 41.5; SD, 10.2) who were in treatment for at least 6 months (median = 24; $Q_1 = 12$; $Q_3 = 60$) at 1 of the 3 opioid agonist treatment programs operated by the APT Foundation, Inc (hereafter referred to as APT), a private, not-for-profit, community-based organization located in New Haven, CT, that had a census of approximately 1500 patients at the beginning of data collection. Participants were predominantly Caucasian (58%), male (57%), never married (53%), and unemployed (43%) or disabled (29%). A majority of participants had at least a high school level of education (68%). All participants had at least 1 prior MMT episode; the frequency of prior MMT episodes ranged from 1 to 15 (median = 2; $Q_1 = 1$; $Q_3 = 3$).

Design

The current study used a cross-sectional survey design.

Procedures

Participants were self-selected in response to study flyers indicating, "This study aims to better understand patients' experiences and treatment needs at APT." No references to trauma or pain were printed on the flyer. Flyers were posted at APT's Legion, Orchard, and Park MMT clinics. Study inclusion criteria were that participants needed to be (1) currently enrolled in MMT at APT and (2) English speaking. The first 50 patients from each of the 3 clinics who responded to the flyer by contacting a research assistant were admitted into the study. All patients who spoke with a research assistant about the study agreed to participate. Research assistants administered the questionnaire packet (measures described below) after describing the study, including potential risks and benefits of study participation. Participants were compensated $10 for study participation. This study, involving the use of survey data without identifiers, was presented to the Human Investigations Committee at APT and the Yale University School of Medicine and was exempted from review per United States Department of Health and Human Services (HHS) regulation 45 CFR 6.101(b) (2). Consequently, rather than collecting written informed consent before study enrollment, research assistants provided prospective participants with an information sheet regarding the nature of the study, reviewed its content, including potential costs and benefits of study enrollment, and answered questions about the study.

Measures

Life Experiences Checklist

Respondents were asked, according to the Life Experiences Checklist (LEC),[14] to report if they had experienced 13 possible traumatic experiences (yes/no): natural disaster (eg, tornado, flood), fire or explosion, transportation accident (eg, car accident, train wreck), serious accident (at work, home, or during recreational activity), exposure to toxic substance (eg, dangerous chemicals, radiation), physical assault (eg, being attacked, beaten up), assault with a weapon (eg, being shot or stabbed), sexual assault (eg, rape, attempted rape, made to perform any type of sexual contact through force or threat or harm), other unwanted or uncomfortable sexual experience, combat or exposure to a war zone, captivity (in the military or as a civilian), life-threatening illness or injury, and severe human suffering (eg, ongoing poverty or starvation, continued homelessness). LEC items were designed to screen for lifetime exposure to possible traumatic experiences that meet threshold for DSM-IV-TR PTSD Criterion A1.[1]