

Conduct Disorder Increases Risk of Traumatic Exposure and Subsequent PTSD

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Introduction

- ◆ Conduct disorder (CD) is a mental disorder within childhood and/or adolescence that is characterized by aggressive, delinquent, and deceitful behaviour such as bullying, physical or sexual violence, stealing, vandalizing, and running away from home.
- ◆ Clinical data has indicated that exposure to trauma and meeting criteria for posttraumatic stress disorder (PTSD) is common among individuals with a history of conduct disorder.
- ◆ Possible explanations for this relationship include increased risk of traumatic events (TE) in individuals with conduct problems, or increased hostility/aggression in traumatized individuals leading to a CD diagnosis.
- ◆ The extant literature has generally focused on clinical samples; epidemiologic studies have not been conducted to examine the relationship between CD, TEs, and PTSD, and how this relationship may vary by sex.
- ◆ The current research has three main objectives: (1) to determine if individuals diagnosed with CD are more likely than individuals without CD to experience specific TEs (2) or PTSD, (3) and to examine the developmental course between CD and PTSD.

Methods

- ◆ The current investigation was conducted using Wave II of the National Epidemiologic Survey of Alcohol and Related Conditions (NESARC), a large, nationally-representative survey of American adults ($n = 34,653$).
- ◆ All interviews were conducted face-to-face by trained, lay interviewers.
- ◆ Lifetime CD (with or without antisocial personality disorder) and PTSD were diagnosed using the Alcohol Use Disorder and Associated Disabilities Interview Schedule DSM-IV Version (AUDADIS-IV), a fully structured diagnostic interview capable of diagnosing mental disorders using DSM-IV criteria.
- ◆ Analyses were conducted using 25 specific TEs as well as five childhood trauma clusters (physical abuse, emotional abuse, sexual abuse, physical neglect, and emotional neglect).
- ◆ Multiple logistic regressions were performed to examine the relationship between CD and individual TE's and PTSD. To better understand sex differences in these relationships, all analyses were conducted using the entire sample and then separately for males and females. Thereafter, males with CD were compared to females with CD for all analyses. Finally, developmental course was assessed by comparing mean age of onset for CD and PTSD symptoms for males and females.

Results

- ◆ The majority of individuals diagnosed with both CD and PTSD developed CD symptoms first (72.9%), with females (13.0 years) experiencing a slightly later age of onset of CD symptoms than males (12.3 years). There were no significant differences in age of onset of PTSD symptoms between males and females.
- ◆ Individuals with CD were more likely to experience any TE compared to those without a CD diagnosis (AOR = 2.69, 95% CI: 1.99-3.64).
- ◆ The most prevalent TEs for females with CD were sexual assault and physical assault by a partner. Males with CD were most likely to experience assaultive violence by others (individual TE data not shown).
- ◆ Female participants were nearly twice as likely to have experienced a TE compared to male participants (AOR = 2.20, 95% CI: 1.20-4.04).
- ◆ Both males and females with conduct disorder were more likely to be diagnosed with PTSD than individuals without conduct disorder; however, these results were no longer significant after adjusting for the presence of other Axis I and II disorders.
- ◆ Female participants were nearly two and a half times as likely to meet criteria for PTSD compared to male participants (AOR = 2.55, 95% CI: 1.72-3.79).

Discussion

- ◆ Nearly all participants endorsed experiencing a TE at some point in their lives.
- ◆ Although female participants were significantly more likely to endorse having experienced a TE, there were significant differences in the types of TE endorsed by each sex.
- ◆ While the minority of participants met diagnostic criteria for PTSD, individuals diagnosed with CD were more likely to be diagnosed with PTSD. Although this relationship was no longer significant after adjusting for other Axis I and II disorders, when female participants with CD were compared directly to male participants with CD significantly higher rates of comorbidity were observed in female participants.
- ◆ Of those diagnosed with both PTSD and CD, nearly three quarters developed CD first.
- ◆ These data suggest that individuals with CD may be more likely to experience TEs, placing them at an increased risk of developing PTSD.
- ◆ This vulnerability appears to be particularly strong among females.

| PTSD | No CD n% | CD n% | AOR-1 95% CI | AOR-2 95% CI |
|--------------|---------------|--------------|----------------------------|------------------|
| Total Sample | | | | |
| No PTSD | 30,910 (93.8) | 1,280 (88.6) | 1.00 | 1.00 |
| Yes PTSD | 2,265 (6.2) | 198 (11.4) | 2.17 (1.76-2.67)*** | 1.12 (0.90-1.39) |
| Males Only | | | | |
| No PTSD | 13,014 (96.2) | 876 (91.6) | 1.00 | 1.00 |
| Yes PTSD | 581 (3.8) | 93 (8.4) | 2.18 (1.62-2.95)*** | 1.13 (0.82-1.54) |
| Females Only | | | | |
| No PTSD | 17,896 (91.7) | 404 (80.5) | 1.00 | 1.00 |
| Yes PTSD | 1,684 (8.3) | 105 (19.5) | 2.21 (1.63-2.99)*** | 1.13 (0.83-1.54) |

Note. All n's were unweighted. All percents were weighted.

AOR 1 indicates adjustments for age, marital status, income, race, and sex.

AOR 2 indicates adjustments for age, marital status, income, race, sex, and any Axis I or II disorder (excluding PTSD)

*p ≤ .05. **p ≤ .01. ***p ≤ .001.

| Traumatic Events (TE) | No CD n% | CD n% | AOR-1 95% CI | AOR-2 95% CI |
|-----------------------|---------------|--------------|----------------------------|----------------------------|
| Total Sample | | | | |
| No TE | 4,915 (14.7) | 81 (6.5) | 1.00 | 1.00 |
| Any TE | 28,110 (85.3) | 1,393 (93.5) | 2.69 (1.99-3.64)*** | 1.72 (1.26-2.35)*** |
| Males Only | | | | |
| No TE | 1,889 (14.1) | 60 (7.5) | 1.00 | 1.00 |
| Any TE | 11,644 (85.9) | 905 (92.5) | 2.27 (1.59-3.23)*** | 1.54 (1.07-2.20)* |
| Females Only | | | | |
| No TE | 3,026 (15.3) | 21 (3.8) | 1.00 | 1.00 |
| Any TE | 16,466 (84.7) | 488 (96.2) | 5.14 (3.00-8.80)*** | 3.09 (1.77-5.39)*** |

Note. All n's were unweighted. All percents were weighted.

AOR 1 indicates adjustments for age, marital status, income, race, and sex.

AOR 2 indicates adjustments for age, marital status, income, race, sex, and any Axis I or II disorder (excluding PTSD)

*p ≤ .05. **p ≤ .01. ***p ≤ .001.

| | CD (Males) n% | CD (Females) n% | AOR-1 95% CI | AOR-2 95% CI |
|------------------|------------------|--------------------|----------------------------|----------------------------|
| Traumatic Events | | | | |
| No TE | 60 (7.5) | 21 (3.8) | 1.00 | 1.00 |
| Any TE | 905 (92.5) | 488 (96.2) | 2.20 (1.20-4.04)* | 2.15 (1.17-3.94)* |
| PTSD | | | | |
| No PTSD | 876 (91.6) | 404 (80.5) | 1.00 | 1.00 |
| Yes PTSD | 93 (8.4) | 105 (19.5) | 2.55 (1.72-3.79)*** | 2.32 (1.54-3.51)*** |

Note. All n's were unweighted. All percents were weighted.

AOR 1 indicates adjustments for age, marital status, income, race, and sex.

AOR 2 indicates adjustments for age, marital status, income, race, sex, and any Axis I or II disorder (excluding PTSD)

*p ≤ .05. **p ≤ .01. ***p ≤ .001.