Factor Structure of PTSD Symptoms in Women with a History of Sexual Victimization

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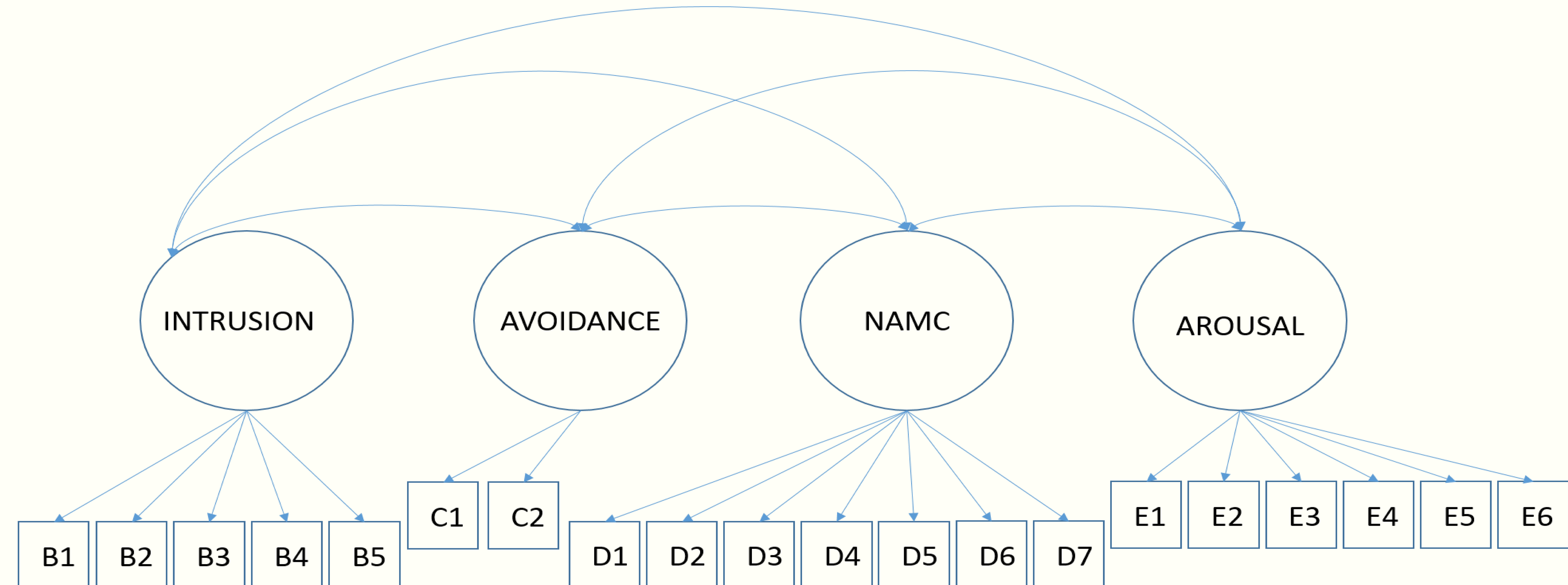
Introduction

- In 2014, DSM-5 introduced a restructured posttraumatic stress disorder (PTSD) diagnosis with four (rather than three) symptom clusters: Intrusion, Avoidance, Negative Alterations in Mood/Cognitions, and Arousal/Reactivity Alterations.
- Despite the high prevalence of posttraumatic stress disorder (PTSD) resulting from a sexual assault (NCPTSD, 2005), few studies have examined the factor structure of PTSD symptoms in this population.
- Although researchers have begun to evaluate this factor structure across several populations of trauma survivors (e.g., combat veterans; Forbes et al., 2015; Gentes et al., 2015), little is known about the factor structure of the new criteria among victims of sexual assault. Given the high prevalence of PTSD resulting from sexual assault (NCPTSD, 2005), this knowledge is critical for improving assessment and diagnostic procedures as well as developing targeted interventions that address appropriate symptom clusters (Elhai et al., 2011). Additionally, the results of this study may be used to validate the new DSM-5 measure of PTSD
- We examined the factor structure of PTSD symptoms in a sample of women who had experienced sexual assault. Drawing on prior research, we predicted that the current DSM-5 four-factor model would be supported in this group.

Method

- Participants
  - 204 university women reporting a history of sexual assault in adulthood and providing complete responses
  - Age ranged from 19 to 31 (*M* = 20.3, *SD* = 1.7)
  - Primarily non-Hispanic White (84.5%).
  - Participants were classified according to the most severe sexual victimization they endorsed, with 18.5% endorsing rape, 55.4% attempted rape, 10.0% sexual contact, and 16.1% verbal sexual coercion.
- Measures
  - **Sexual assault characteristics.** The Sexual Experiences Survey (SES-F; Koss & Gidycz, 1985) is a 13-item scale used to assess the presence and severity of unwanted sexual experiences in adulthood. Possible sexual experiences ranged from less severe ("Have you ever had a man misinterpret the level of sexual intimacy you desired?") to more severe ("Have you ever been raped?"). Items were rated on a frequency Likert-type scale (1 = *never* to 5 = *often*).
  - **PTSD symptomology**. The PTSD Checklist (PCL-5; Weathers et al., 2013) was used to assess the severity of PTSD symptoms experienced within the past month. The PCL-5 contains 20 items, which correspond directly to the DSM-5 PTSD symptomology. Symptoms are rated for severity within the past month on a Likert-type scale (0 = *not at all* to 4 = *extremely*). In order to receive a PTSD diagnosis, participants met DSM-5 PTSD diagnostic structure.

Four-Factor PTSD Model



Note: NAMC = Negative alterations in mood/cognitions, Arousal = Changes in arousal, B1= Intrusive thoughts, B2= Recurrent dreams, B3= Flashbacks, B4 = Psychological reactivity to trauma cues, B5 = Physiological reactivity to trauma cues, C1 = Avoiding thoughts of trauma, C2= Avoiding reminders of trauma, D1 = Inability to recall aspects of trauma, D2 = Negative beliefs, D3 = Distorted blame, D4 = Persistent negative emotion state, D5 = Loss of interest, D6 = Detachment, D7 = Inability to experience positive emotions, E1 = Irritability, E2 = Reckless or self-destructive behavior, E3 = Hypervigilance, E4 = Exaggerated startle response, E5 = Difficulty concentrating, E6 = Sleep disturbance

Analyses / Results

- Analytic Approach
  - To ascertain the factor structure of PTSD symptoms, confirmatory factor analysis (CFA) of the PCL-5 was employed with an estimation of weighted least square means and variance adjusted. To identify the model, the loading of the first item of each latent factor was fixed to 1. All factors were allowed to correlate; errors were not allowed to correlate .
- Results
  - Current PTSD severity was relatively mild in the present sample (*M* = 7.6, range 0-38), with 1% meeting the diagnostic criteria for a DSM-5 PTSD.
  - Results from CFA indicated that the factor structure of PTSD in the present sample conformed to the DSM-5 four-factor model of PTSD (χ^2 [90, *N* = 204] = 426.98, $p < .001$, CFI = .95, TLI = .94, RMSEA = .09 (90% CI: .078-.099). Factor loadings ranged from .69-.99 ($p < .001$), and factor correlations ranged from .42-.95 ($p < .001$).

Discussion

- To our knowledge, this study is the first to examine the new DSM-5 four-factor model for PTSD symptoms in sexual assault victims. Results showed that the four-factor model is an adequate fit for the data, thus supporting the symptom clusters in the DSM-5. These results also converge with literature supporting a four-factor model with other trauma populations (e.g., Forbes et al., 2015).
- Limitations
  - The use of self-reports may result in response bias. Future studies should use structured interviews (e.g., CAPS-5) for investigation of a PTSD diagnosis. Second, despite all participants reporting a history of sexual assault, the prevalence of PTSD was low in the present study. Future studies should focus on validating the fit of the DSM-5 four-factor model with survivors of sexual assault known to meet criteria for PTSD.
- Implications
  - Validating the PTSD factor structure across trauma types (e.g., sexual assault) has implications for diagnostic algorithms and prevalence rates, and can be the gateway to services and support mechanisms.