New Advances in Trauma:
Basic Research to Clinical Practice

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New Advances In Trauma:
Basic Research to Clinical Practice

1) *Mental Health Sequelae of Workplace Trauma*
   - Kelsey C. Collimore, M.A., University of Regina

2) *A New Design for Investigating Precursors for Posttraumatic Stress*
   - R. Nicholas Carleton, M.A., University of Regina

3) *Appraisals of Trauma Severity: Accounting for the Heterogeneity in Emergency Service Providers' Reactions to Traumatic Events*
   - Lori K. Gray, Ph.D., University of Windsor, Schnayer, McGrory, and Associates, Windsor-Essex Emergency Medical Services

4) *Anxiety Sensitivity Dimensions, PTSD Symptom Clusters, and Treatment Response: An Exploratory Analysis of a New Behavioural Intervention for PTSD*
   - Jaye Wald, Ph.D., University of British Columbia

Discussant: Sherry H. Stewart, Ph.D., Dalhousie University

Mental Health Sequelae of Workplace Trauma

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Outline

- Background
  - Posttraumatic Stress Disorder (PTSD)
  - Prevalence of PTSD in community, veteran, and workplace trauma samples
  - Other psychological injuries following a workplace trauma
- Method
- Analyses and Results
- Summary and Discussion

Posttraumatic Stress Disorder (PTSD)

- Intense fear, helplessness, or horror in response to a traumatic event
- Three symptoms clusters
  - Reexperiencing
  - Avoidance and numbing
  - Hyperarousal

PTSD in Community Samples

- Lifetime prevalence rate
  - 7% to 12%
    - (Breslau, 2002; Kessler et al., 1995; Seedat & Stein, 2001)
- 2:1 (women: men)

PTSD in Veteran Samples

- 18.7% to 30% among Vietnam war veterans
  - (Dohrenwend et al., 2006; Kulka et al., 1990)
- 4% to 19% among Persian Gulf veterans
  - (Sutker et al., 1993; Wolf et al., 1993)
- 16% among those returning from Iraq and Afghanistan
  - (Hoge et al., 2004)

PTSD Following a Workplace Trauma

- 20% (Burgess et al., 1996)
  - $n=121$
- 34.7% (PTSD; Asmundson et al., 1998)
  18.2% (Partial PTSD)
  - $n=139$
- 56% (Scheibe et al., 2001)
  - $n=54$

Other Psychological Injuries following a Workplace Trauma

- Major Depressive Disorder
- Mood Disorder Not Otherwise Specified
- Acute Stress Disorder
- Anxiety Disorder Not Otherwise Specified ("partial PTSD")
- Adjustment Disorders

(Gnam, 2000)

Relevant Research on Psychological Injuries following a Workplace Trauma

- Scheibe et al. (2001)
  - MDD (32%)
  - Pain Disorder (18%)
  - Other Anxiety Disorder (14%)
  - Adjustment Disorder (14%)

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Purpose

- To investigate the prevalence of mental health disorders among persons exposed to a workplace trauma
- To examine their associations with anxiety and posttraumatic stress symptoms

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Method

- Participants
  - n=1581 claimants (74.4% men, M_{age}=42.1, SD_{age}=9.9)
- Referred by the Workplace Safety and Insurance Board (WSIB) of Ontario for a psychological evaluation following a workplace accident

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Method

- Type of workplace trauma reported
  - 74%
    - Transportation accident, contact with machine/electricity/fire/harmful substance, strains, natural disaster
  - 16.7%
    - Threatened assault, physical or sexual abuse/assault, robbery, witness injury/death, hearing something horrible that happened to someone
  - Information regarding trauma type was unavailable in 9% of the cases

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Method

- Measures
  - Demographics
  - Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-IV)
  - Beck Anxiety Inventory (BAI)
  - Trauma Symptom Inventory (TSI)

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Analyses

- Descriptive Statistics
- Group comparisons using analysis of variance (ANOVA)
  - Diagnostic groups (primary) were compared to determine whether there were any differences in anxiety and posttraumatic symptom responding
  - Post hoc tests where applicable

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Results

- The most prevalent primary diagnoses following a workplace trauma were:
  - PTSD (n=440; 27.8%)
  - Major Depressive Disorder (MDD; n=280; 17.7%)
  - Pain Disorder associated with both psychological factors and a general medical condition (n=246; 15.6%)
  - Anxiety Disorder Not Otherwise Specified (ADNOS; n=96; 6.1%)
  - Adjustment Disorder with mixed anxiety and depressed mood (AD; n=54; 3.4%)

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Results – Comorbidity

- PTSD
  - MDD - 57.3%
  - Other anxiety disorder - 6.3%
  - Pain disorder - 6.1%
- MDD
  - PTSD - 33.6%
  - Other anxiety disorder -18.2%
  - Pain disorder - 21.4%
- Pain Disorder
  - PTSD - 8.1%
  - Other anxiety disorder -6.9%
  - MDD - 52.8%
- ADNOS
  - PTSD - 5.2%
  - Other anxiety disorder - 3.1%
  - MDD - 15.6%
  - Pain disorder - 5.2%
- AD
  - PTSD - 1.9%
  - Other anxiety disorder - 7.4%
  - MDD - 0%
  - Pain disorder - 13%

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Results

- Descriptive analyses revealed no significant between group differences on sex ratios (χ^2= 7.36; p>.10).
- Significant differences on age were found between diagnostic groups; however, the effect size was relatively small (eta^2=.03).
- Bonferroni-corrected t-tests revealed no statistically significant sex differences (p>.05) on the BAI or the TSI subscales.

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Results

◉ Significant differences were found between groups on:
> BAI, $F(4,326)=4.89$. $p<.01$, $eta^2= .06$
> TSI Anxious Arousal, $F(3,243)=2.85$. $p<.05$, $eta^2=.03$
> TSI Depression, $F(3,243)=8.29$. $p<.01$, $eta^2=.09$
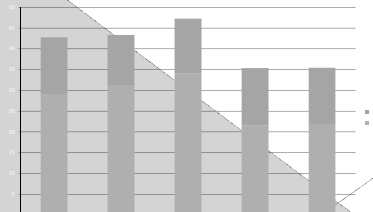> TSI Intrusive Experiences, $F(3,243)=4.53$. $p<.01$, $eta^2=.05$

Results

◉ Post-hoc analyses revealed that the MDD and Pain Disorder groups scored higher than the ADNOS group on the BAI.

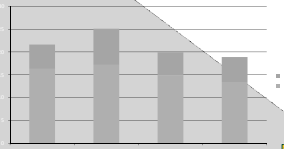◉ BAI scores across all diagnostic groups were moderate to severe.
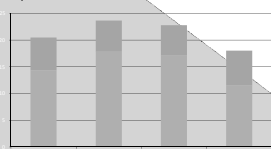
Descriptive Statistics - BAI

Results

◉ Post-hoc analyses revealed that:
> The MDD group scored higher than the ADNOS group on the TSI Anxious Arousal subscale.
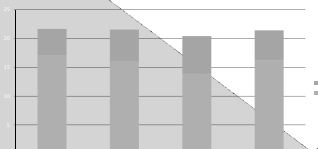

Results

◉ The MDD group scored higher than the PTSD and ADNOS group on the TSI Depression subscale; the Pain Disorder group scored higher than the ADNOS group on the TSI Depression subscale.

Results

◉ The PTSD group scored higher than the Pain Disorder group on the TSI Intrusive Experiences subscale.

Summary and Discussion

◉ High prevalence rate of PTSD - 27.8%

◉ Other prevalent psychological injuries:
> MDD - 17.7%
> Pain Disorder - 15.6%
> ADNOS - 6.1%
> AD - 3.4%

◉ High levels of comorbidity
> Prevalence rates of MDD in persons with a primary diagnosis of PTSD and Pain Disorder (>50%)

Summary and Discussion

◉ MDD and the Pain Disorder groups had greater levels of anxiety (i.e., BAI scores) than the ADNOS group.
> ~52% of persons in the MDD group had an anxiety disorder
> 15% of persons in the Pain Disorder group had an anxiety disorder
> Highlights the role of anxiety in pain

Summary and Discussion

◉ Persons with a primary diagnosis of MDD had greater levels of depression than persons with a primary diagnosis of PTSD.

◉ Persons with a primary diagnosis of MDD and Pain Disorder had greater levels of depression (i.e., TSI Depression scores) than persons with a primary diagnosis of ADNOS.
> Highlights the role of depression in pain
> Reflection of an overall level of distress associated with the Pain Disorder diagnosis?

Limitations

- Low proportion of women
- Assessment/measurement of the type of trauma
- Cross-sectional nature of the study
- Factor of compensation seeking

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Implications

- Workplace trauma can be associated with significant distress and impairment
  - PTSD, MDD, Pain Disorder
- Clinical Implications
  - Assessment

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Future Research Directions

- Examine the nature of the association between MDD and PTSD
- Integrated treatment approaches for MDD and each of PTSD and Pain Disorder
  - Empirical evaluation of these treatment possibilities
- Temporal sequence of symptom development
- Prospective studies in order to explore the progression and consequences of psychological sequelae

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Thank you

Questions?

Copies of these slides can be acquired at www.aibl.ca

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