Child Abuse Exposure and Suicidal Ideation, Plans, and Attempts in Canada: A Military Personnel and General Population Comparison

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Presenter Disclosure

• No relationship with commercial interests

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  4. The Department of National Defense (DND) for data collection

• No conflicts of interest to declare
Background

Suicide is an important public health problem in both military and civilian populations.

Prevalence of suicidal ideation and plans is slightly higher the Canadian Armed Forces (CAF) compared to the Canadian General Population (CGP). ¹

¹ Sareen et al, in press
Background

Deployment-related trauma may play a role in increasing suicide-related outcomes.

However, suicide-related outcomes have been noted among military personnel who have not deployed.¹

Hence, need to look at other drivers of suicidal behaviour, such as child abuse:

- Prevalent in military and civilian populations²⁻⁴
- Associated with suicidality in civilian population⁵
Objectives

1) To determine if a child abuse history is more prevalent in the CAF compared to the CGP.

2) To compare the strength of the association between child abuse history and suicide-related outcomes among the CAF and the CGP.
Data

1. Canadian Forces Mental Health Survey (CFMHS)
   - Collected in 2013
   - $n = 8,161$ (Regular Forces $n = 6,692$; Reserve Forces $n = 1,469$)

2. Canadian Community Health Survey-Mental Health (CCHS-MH)
   - Collected in 2012
   - $n = 23,395$

   - Both datasets were restricted to ages 18-60 years old
Measurement- Independent Variable

Child Abuse exposure that occurred before 16 years of age

- Physical abuse
- Exposure to intimate partner violence
- Sexual abuse
- Any child abuse
Measurement of Child Abuse

• Physical abuse:
  1. Being slapped on the face, head, or ears or hit or spanked with something hard 3 or more times;
  2. Being pushed, grabbed, shoved, or having something thrown at the respondent to hurt them 3 or more times;
  3. Being kicked, bit, punched, choked, burned, or physically attacked 1 or more times.
Measurement of Child Abuse

• Exposure to intimate partner violence:
  1. Having seen or heard parents, stepparents, or guardians hitting each other or another adult in the home 3 or more times.
Measurement of Child Abuse

- Sexual abuse was defined as present if either of the following occurred 1 or more times:

  1. Attempted or being forced into unwanted sexual activity by being threatened, held down, or hurt in some way and/or

  2. Sexual touching, meaning unwanted touching or grabbing, kissing, or fondling against the respondent’s will.
Measurement- Independent Variable

Deployment-Related Traumatic Events (DRTE)

1. Known someone who was injured/killed
2. Life threatening situation and unable to respond
3. Ever been injured
4. Ever seen ill/injured women or children and unable to help
5. Felt responsible for the death of an ally
6. Ever been shot or hit but gear protected you
Measurement - Dependent Variable

Suicide-related outcomes

- Lifetime suicidal ideation
- Lifetime suicide plans
- Lifetime suicide attempts
Measurement- Independent Variables

Sociodemographic Covariates

- Age
- Sex
- Marital Status
- Education
- Income

- Military Rank
  - Junior Non-Commissioned Member (NCM), Senior NCM, and Officer.
Statistical Analysis

- Statistical weights and bootstrapping were applied in all analyses.

- **Multivariable logistic regression** was used to determine the relationship between child abuse exposure, deployment-related trauma, and suicide-related outcomes.
Objective 1

To determine if a child abuse history is more prevalent in the CAF compared to the CGP.
Results Objective 1

Prevalence of Any Abuse in CGP and CAF

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th>Females</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canadian General Population</td>
<td>34.0%</td>
<td>47.4%</td>
<td>47.7%</td>
</tr>
<tr>
<td>Canadian Regular Forces</td>
<td>48.1%</td>
<td>50.0%</td>
<td>49.4%</td>
</tr>
<tr>
<td>Canadian Reserve Forces</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Objective 2

To compare the strength of the association between child abuse history and suicide-related outcomes among the CAF and the CGP.
Results Objective 2

Association between Any Child Abuse and Lifetime Suicide-Related Outcomes

<table>
<thead>
<tr>
<th></th>
<th>Suicide Attempts</th>
<th>Suicide Plans</th>
<th>Suicide Ideation</th>
</tr>
</thead>
<tbody>
<tr>
<td>CGP</td>
<td>6.06</td>
<td>4.66</td>
<td>4.29</td>
</tr>
<tr>
<td>CAF Regular</td>
<td>2.86</td>
<td>2.68</td>
<td>2.06</td>
</tr>
<tr>
<td>CAF Reserve</td>
<td>2.47</td>
<td>3.23</td>
<td>2.33</td>
</tr>
</tbody>
</table>
Results Objective 2

Association between Any Child Abuse and Lifetime Suicide-Related Outcomes

- CGP: 4.66 (Suicide Attempts), 4.29 (Suicide Plans), 6.06 (Suicide Ideation)
- CAF Regular: 2.86 (Suicide Attempts), 2.68 (Suicide Plans), 2.06 (Suicide Ideation)
- CAF Reserve: 2.33 (Suicide Attempts), 3.23 (Suicide Plans), 2.47 (Suicide Ideation)

Relationship stronger in the CGP for all suicide outcomes
Results Objective 2

Association between Physical Abuse and Lifetime Suicide-Related Behaviours

<table>
<thead>
<tr>
<th></th>
<th>Suicide Attempts</th>
<th>Suicide Plans</th>
<th>Suicide Ideation</th>
</tr>
</thead>
<tbody>
<tr>
<td>CGP</td>
<td>3.40</td>
<td>3.46</td>
<td>4.55</td>
</tr>
<tr>
<td>CAF Regular</td>
<td>2.30</td>
<td>2.35</td>
<td>1.89</td>
</tr>
<tr>
<td>CAF Reserve</td>
<td>2.24</td>
<td>2.68</td>
<td>2.30</td>
</tr>
</tbody>
</table>

Department of Community Health Sciences
COLLEGE OF MEDICINE
FACULTY OF HEALTH SCIENCES
Results Objective 2

Association between Physical Abuse and Lifetime Suicide-Related Behaviours

- **CGP**
  - Suicide Attempts: 4.55
  - Suicide Plans: 3.40
  - Suicide Ideation: 3.46
- **CAF Regular**
  - Suicide Attempts: 2.30
  - Suicide Plans: 2.35
  - Suicide Ideation: 1.89
- **CAF Reserve**
  - Suicide Attempts: 2.24
  - Suicide Plans: 2.68
  - Suicide Ideation: 2.30

Relationship stronger in CGP for 2 suicide outcomes
Results Objective 2

Association between Exposure to Intimate Partner Violence and Lifetime Suicide-Related Behaviours

- CGP: Suicide Attempts (3.57), Suicide Plans (3.69), Suicide Ideation (4.47)
- CAF Regular: Suicide Attempts (2.85), Suicide Plans (3.07), Suicide Ideation (2.28)
- CAF Reserve: Suicide Attempts (2.85), Suicide Plans (2.26), Suicide Ideation (4.47)
Results Objective 2

Association between Exposure to Intimate Partner Violence and Lifetime Suicide-Related Behaviours

- CGP
  - Suicide Attempts: 5.70
  - Suicide Plans: 4.47
  - Suicide Ideation: 3.69

- CAF Regular
  - Suicide Attempts: 3.07
  - Suicide Plans: 2.85
  - Suicide Ideation: 2.28

- CAF Reserve
  - Suicide Attempts: 2.00
  - Suicide Plans: 2.26
  - Suicide Ideation: 2.85

Relationship stronger in the CGP for 2 suicide outcomes
Results Objective 2

Association between Sexual Abuse and Lifetime Suicide-Related Behaviours

- CGP
  - Suicide Attempts: 7.67
  - Suicide Plans: 6.49
  - Suicide Ideation: 4.81

- CAF Regular
  - Suicide Attempts: 6.32
  - Suicide Plans: 4.36
  - Suicide Ideation: 3.02

- CAF Reserve
  - Suicide Attempts: 3.39
  - Suicide Plans: 2.81
  - Suicide Ideation: 1.64

Odds Ratio

0.00 1.00 2.00 3.00 4.00 5.00 6.00 7.00 8.00 9.00
Results Objective 2

Association between Sexual Abuse and Lifetime Suicide-Related Behaviours

<table>
<thead>
<tr>
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<th>Suicide Ideation</th>
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<tr>
<td>CAF Reserve</td>
<td>2.81</td>
<td>3.39</td>
<td></td>
</tr>
</tbody>
</table>

Relationship stronger in CGP for 1 suicide outcome
Discussion

Important Finding 1:

- In Canada, child abuse exposure is more likely among military personnel compared to the general population.
Discussion

Important Finding 2:

- The effect of child abuse on suicide-related outcomes is generally stronger among the CGP compared to military personnel.
Discussion

• **Strengths:**
  - Nationally representative datasets
  - Both use the same sampling design
  - Collected at similar time points

• **Limitations:**
  - Data are cross sectional and retrospective
  - Reserve force sample is not representative
  - We cannot determine the temporality of onset of trauma and suicide related outcomes
  - Other non-occupational trauma may have an effect on suicide related outcomes
  - Recruitment and retention standards in the CAF may diminish the suicide-vulnerable population
Conclusion

• Currently, public attention on military suicide has focused on deployment-related trauma.

• Prevention efforts targeting child abuse or mediators between child abuse and suicide-related outcomes may have a larger impact on reducing prevalence of suicide behaviours in the CAF.
Thank you!

Questions?
Original Investigation

Association of Child Abuse Exposure With Suicidal Ideation, Suicide Plans, and Suicide Attempts in Military Personnel and the General Population in Canada

Tracie O. Afifi, PhD; Tamara Taillieu, MSc; Mark A. Zamorski, MD; Sarah Turner, BHSc; Kristene Cheung, MA; Jitender Sareen, MD, FRCPC

**IMPORTANCE** Recent evidence indicates a high prevalence of child abuse exposure in modern US veterans, which may explain in part their higher likelihood of suicide relative to civilians. However, the relationship between child abuse exposure and suicide-related outcomes in military personnel relative to civilians is unknown. Furthermore, the associations among deployment-related trauma, child abuse exposure, and suicide-related outcomes in military personnel have not been examined.

**OBJECTIVES** To determine whether child abuse exposure is more prevalent in Canadian Armed Forces (CAF) personnel compared with the Canadian general population (CGP); to compare the association between child abuse exposure and suicidal ideation, suicide plans, and suicide attempts among the CAF and CGP; and to determine whether child abuse exposure has an additive or interaction effect on the association of deployment-related trauma and past-year suicidal ideation and suicide plans among Regular Forces personnel.

**DATA, SETTING, AND PARTICIPANTS** Data were collected from the following 2 nationally representative data sets: the 2013 Canadian Forces Mental Health Survey (CFMHS) for the CAF.