Assessing and Reducing Violence Risk in Veterans with PTSD

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Polling Question #1

What percentage of military service members and veterans do you think report engaging in violence or aggression toward others in a one year period?

A. <10%
B. 10-20%
C. 20-30%
D. 30-40%
E. 40-50%
F. >50%
Frequency of Violence in Veterans

• Research indicates aggression toward others is a significant problem reported by up to one-third of military service members and veterans (Jakupcak et al., 2007; Killgore et al., 2008; Sayer et al., 2010; Thomas et al., 2010).

• As such, violence is a problem for a subset of veterans.
Frequency of Violence in Veterans

- National random sample survey of veterans who served in the military since 9/11/01 (Elbogen et al., 2012a).
  - 32% reported incidents of physical aggression to others in a one year period.
  - 11% reported incidents of severe or lethal violence in one year period of time.
Frequency of Violence in Veterans

- A review of violence in military service personnel and veterans in the U.S. and U.K. yielded estimates of 10% for physical assault and 29% for all types of physical aggression in the last month (MacManus et al., 2015).

- Increasing need to improve ability to detect military service members and veterans at highest risk of violence to others.
Exercise

List three factors you think place military veterans at higher risk of engaging in physical aggression toward others:

1. ________________________________
2. ________________________________
3. ________________________________
Polling Question #2

What risk factor do you think is the strongest predictor of violence among military service members and veterans?

A. Younger Age
B. Posttraumatic Stress Disorder (PTSD)
C. Traumatic Brain Injury (TBI)
D. Male Gender
E. Combat Exposure
F. Financial Instability
Risk Factors in Veteran Populations

- Younger age
- Past violent behavior
- Child Abuse/Maltreatment
- Combat Exposure
- Meets PTSD Criteria
- Substance Abuse
- Major Depression
- Financial/Work Status
Risk Factors in Veteran Populations

• Although some risk factors relate to military service, many risk factors in veterans overlap with those for non-veterans such as younger age and history of violence.
• One exception is gender, which has not shown to be related to violence in military and veteran populations.
• Some factors not consistently shown to be related to violence (e.g., traumatic brain injury).
New research has identified that some veterans may be at risk of harm to self and others (Watkins et al., 2017; Calhoun et al., 2017; Elbogen et al., 2017).

A number of the empirical studies on risk factors in Veteran populations are retrospective and measure violence by self-report; thus, there are limitations to current literature.
Improving Risk Assessment

Tip #1

To improve risk assessment in practice, review risk factors for violent behavior in veteran and military populations that have empirical support.
PTSD and Violence in Veterans

• The National Vietnam Veterans Readjustment Study (NVVRS) is one of the first large nationally representative surveys of military veterans.

• The NVVRS found that 33% of male Vietnam Veterans with PTSD reported intimate partner violence (IPV) during the previous year, compared to 13.5% without PTSD. (Kulka et al., 1990)
PTSD and Violence in Veterans

- More recently, a large national cohort sample of UK military personnel (active duty and Veteran) linked clinical data to criminal records (MacManus et al., 2013).
- Among those meeting criteria for PTSD, 7.2% had been arrested for violent offending as compared to 3% in those not meeting criteria for PTSD.
PTSD

Yes = 19.52%
No = 6.41%

Severe Violence in Next Year

Elbogen et al., 2014a
Severe Violence in Next Year

Alcohol Misuse

Yes = 17.43%
No = 5.97%
Severe Violence in Next Year

PTSD

Alcohol Misuse

?
Severe Violence in Next Year

PTSD without alcohol misuse 9.96%

PTSD + Alcohol Misuse 35.88%

Alcohol Misuse without PTSD 10.57%

No PTSD or alcohol misuse = 5.27%
PTSD, Symptoms, and Aggression

• Aggression associated with PTSD hyperarousal symptoms (Savarese et al., 2001; Taft et al., 2007):
  • sleep problems
  • difficulty concentrating
  • irritability
  • jumpiness
  • being on guard

• A few studies show link between re-experiencing and violence (Sullivan et al., 2014; Watkins et al., 2017).
PTSD, Anger, and Violence

• Novaco and Chemtob (2015) found that PTSD without anger was not associated with violence in combat veterans whereas PTSD with anger was significantly related to violence.

• A national study (Sippel et al, 2016) found the majority of veterans (61.2%) reported experiencing difficulties controlling anger, many (23.9%) reported experiencing aggressive urges over a two-year period.
PTSD, Suicide, and Violence

- Watkins et al. (2017) found greater PTSD symptoms, specifically re-experiencing, and alcohol misuse symptoms, related to co-occurring aggression and suicide.
- Calhoun et al. (2017) found nonsuicidal self-injury was significantly associated with interpersonal violence in veterans with PTSD.
- Elbogen et al. (2017) found concurrent suicidal ideation and violent impulses were linked to PTSD, childhood abuse, drug misuse, and pain symptoms.
Improving Risk Assessment

Tip #2

To improve risk assessment in practice, understand the role of PTSD may play while identifying possible concurrent factors related to violent behavior by veterans.
## Violence & Psychosocial Well-Being

<table>
<thead>
<tr>
<th>Protective Factor</th>
<th>n</th>
<th>Severe Violence n</th>
<th>Severe Violence%</th>
<th>Chi-Square</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Work</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>862</td>
<td>77</td>
<td>8.96</td>
<td>13.43</td>
<td>0.0002</td>
</tr>
<tr>
<td>No</td>
<td>239</td>
<td>41</td>
<td>17.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Basic Needs Met</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>646</td>
<td>47</td>
<td>7.33</td>
<td>19.29</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>No</td>
<td>455</td>
<td>71</td>
<td>15.65</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Self-Care</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>114</td>
<td>23</td>
<td>23.14</td>
<td>20.27</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Yes</td>
<td>988</td>
<td>92</td>
<td>9.34</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Homeless in Past Year</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>1051</td>
<td>100</td>
<td>9.52</td>
<td>36.87</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Yes</td>
<td>50</td>
<td>18</td>
<td>36.60</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Elbogen et al., 2012*
### Violence & Psychosocial Well-Being

<table>
<thead>
<tr>
<th>Protective Factor</th>
<th>n</th>
<th>Severe Violence</th>
<th>Severe Violence %</th>
<th>Chi-Square</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resilience</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Above Median</td>
<td>562</td>
<td>45</td>
<td>8.10</td>
<td>8.49</td>
<td>0.0036</td>
</tr>
<tr>
<td>Below Median</td>
<td>538</td>
<td>73</td>
<td>13.55</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Self-Determination</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfied</td>
<td>926</td>
<td>77</td>
<td>8.33</td>
<td>35.87</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Not Satisfied</td>
<td>176</td>
<td>42</td>
<td>23.60</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Spiritual Faith</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfied</td>
<td>881</td>
<td>82</td>
<td>9.3</td>
<td>9.97</td>
<td>.0016</td>
</tr>
<tr>
<td>Not Satisfied</td>
<td>220</td>
<td>37</td>
<td>16.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social Support</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfied</td>
<td>654</td>
<td>46</td>
<td>7.06</td>
<td>23.04</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Not Satisfied</td>
<td>447</td>
<td>72</td>
<td>16.19</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Elbogen et al., 2012*
Protective Factors

Elbogen et al., 2012

Predicted probability in past year of severe violence

Number of Protective Factors

0 (n=3) 1 (n=22) 2 (n=49) 3 (n=87) 4 (n=124) 5 (n=166) 6 (n=268) 7 (n=292) 8 (n=364)

Elbogen et al., 2012a
To improve risk assessment in practice, identify protective factors in order to manage, and potentially lower, risk of violence in veteran and military populations.
Polling Question #3

When left to their own clinical judgment, how good are mental health professionals at predicting violent behavior?

A. Much worse than chance
B. Slightly worse than chance
C. Same as chance (flipping a coin)
D. Slightly better than chance
E. Much better than chance
Violence Risk Assessment

- Clinicians slightly better than chance at assessing risk of violence (Mossman, 1994).
- To reduce errors and improve risk assessment, clinicians can make decision-making more systematic, using decision-aides (Monahan & Steadman, 1994; Douglas et al., 1999)
  - To ensure all important information is gathered in the course of diagnosis & treatment.
  - To reduce chances of overlooking critical data in time-pressured clinical practice.
Approaches to Assessing Violence Risk

• Clinical Judgment – reliance on intuition of an individual’s risk of violence
  – shown to be only a little better than chance, prone to decision-making errors.

• Actuarial Models – combination of factors to statistically optimize assessment
  – can miss relevant information, limited accuracy for findings pointing to high risk.
Approaches to Assessing Violence Risk

Structured Professional Judgment model to assess for violence risk:

– Systematic approach to reduce clinical decision-making errors.
– Prompts review of risk and protective factors with scientific and empirical support.
– Points to dynamic and changeable factors that can inform interventions to reduce violence.
<table>
<thead>
<tr>
<th>Method</th>
<th>AUC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flipping a Coin</td>
<td>~0.50</td>
</tr>
<tr>
<td>Clinical Decision-making</td>
<td>~0.66</td>
</tr>
<tr>
<td>History of Violence</td>
<td>~0.71</td>
</tr>
<tr>
<td>Psychopathy Checklist</td>
<td>~0.75</td>
</tr>
<tr>
<td>Violence Risk Appraisal Guide</td>
<td>~0.76</td>
</tr>
<tr>
<td>HCR-20</td>
<td>~0.80</td>
</tr>
<tr>
<td>MacArthur Risk Assessment Study</td>
<td>~0.82</td>
</tr>
<tr>
<td>Perfect Accuracy</td>
<td>~1.0</td>
</tr>
</tbody>
</table>
Improving Risk Assessment

Tip #4

To improve risk assessment in practice, review risk factors in a systematic and structured way to make sure you review key information in your evaluation.
## Violence Screening & Assessment of Needs (VIO-SCAN)

<table>
<thead>
<tr>
<th>Domain</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Instability</td>
<td>Do you generally have enough money each month to cover food, clothing, housing, medical care, transportation, and social activities?</td>
</tr>
<tr>
<td>Combat Experience</td>
<td>Did you personally witness someone (from your unit, an ally unit, or enemy troops) being seriously wounded or killed?</td>
</tr>
<tr>
<td>Alcohol Misuse</td>
<td>Has a relative or friend, or a doctor or other health worker, been concerned about your drinking [alcohol] or suggested you cut down?</td>
</tr>
<tr>
<td>Violence / Arrests</td>
<td>Have you ever been violent toward others or arrested for a crime? (Excludes controlled aggression conducted while deployed in combat)</td>
</tr>
<tr>
<td>PTSD + Anger</td>
<td>In the past week, how many times have you been irritable or had outbursts of anger? (≥ 4 times + PTSD)</td>
</tr>
</tbody>
</table>

(Elbogen et al., 2014b)
Interpreting Individual Items

• Endorsement of an item should prompt more detailed investigation of the risk factor and its relationship to violence.
  – For example, if a veteran endorses history of violence, clinicians should examine type, severity, frequency, and recency of violence.
  – If any of the basic needs are not being met, clinicians should evaluate whether this is connected to violence or aggression.
Interpreting Multiple Items

• Combinations of endorsed risk factors should also be examined.

• Research has shown, for example, that co-occurring PTSD and alcohol misuse have a strong association with violence in veterans.

• Each of the basic needs such be examined with respect to their potential link to risk factors (e.g., homelessness and criminal justice involvement).
VIO-SCAN

• The VIO-SCAN should never be used alone and does not replace comprehensive risk assessment or designate low, medium, or high risk.

• Many risk factors will not always mean high risk of violence and endorsement of few risk factors will not always mean low risk of violence.

• Developed in Iraq/Afghanistan era Veterans but uses risk factors with empirical support from all eras.

• Study measured one year outcomes, not validated for short-term, acute violence risk.
VIO-SCAN

1) Prompt clinicians to consider at least five empirically supported risk factors.
2) Identify veterans who may be at higher risk of violence.
3) Review needs and dynamic, protective factors to develop a plan to reduce risk.
4) Encourage clinical consideration of concurrent factors relevant to violence risk.
Synthesizing Risk and Protective Factors into a Safety Plan

• Under what circumstances is this veteran at highest risk of violence?
• How can this veteran lower risk by reducing dynamic risk factors or increasing protective factors?
• What are this veteran’s perceptions about his or her lowering risk?
• What level of engagement does he or she have in developing a safety plan?
Improving Risk Assessment
Tip #5

• To improve risk assessment in practice, use violence risk assessment instruments with empirical support to complement, not replace, your clinical evaluation of a veteran’s risk of violence while including veterans’ input into the safety planning process.
Recap: A Subset of Military Veterans Report Violence

- Findings reveal a subgroup of military service members and veterans who report recent serious violence such as use of a weapon or beating another person (11%) in a one-year time frame.

- In the same period, a higher number report less severe physically aggressive incidents such as shoving or pushing others (32%).
Recap: Link between PTSD and Violence in Veterans is Complex

- Although most veterans with PTSD report no violence or problems with aggression, PTSD in veterans is associated with a higher rate of violence.
- Concurrent factors need to be considered; for example, veterans with PTSD and alcohol misuse at markedly higher rates of violence.
- Specific PTSD symptoms, including anger and other hyperarousal symptoms, have also been related to increased risk of violence in veterans.
Recap: Non-Military Related Risk Factors Need to be Considered

- Risk factors have been related to violence and aggression in veterans, just as in non-veteran populations:
  - Demographics (e.g., younger age)
  - Criminality (e.g., history of violence)
  - Clinical (e.g. substance abuse)
  - Economic attainment (e.g., meeting basic needs)
Recap: Protective Factors Inform Safety Plans to Manage Risk

- Protective factors have been found to be associated with reduced odds of violence in veterans.
- Psychosocial rehabilitation approaches could be used to manage and potentially reduce violence risk domains of:
  - basic functioning (living, financial, vocational)
  - well-being (social, psychological, spiritual)
Recap: Risk Assessment Tools Help Structure Clinical Decision-Making

Violence Risk Assessment Instruments:
• Guide clinicians through a systematic process of reviewing risk and protective factors.
• Structure clinical evaluations so that risk and protective factors with empirical support are reviewed and not missed.
Recap: Risk Assessment Tools Help Structure Clinical Decision-Making

Violence Risk Assessment Instruments:
- Do not replace clinical decision-making which may involve the need to gather information on factors not contained in the tool.
- Outline steps for developing a safety plan with the input of the veteran assessed.
References


