Deployment Stressors, Gender, and Mental Health Outcomes among Gulf War I Veterans


In this study of Gulf War I Veterans (N = 317), researchers examined gender differences in associations between deployment stressors and mental health outcomes. Compared to men, women reported significantly more anxiety and interpersonal stressors.

**Key Findings:**

- Overall, mission-related stressors (combat experiences, aftermath of battle, perceived threat, difficult living, and working environment) had a similar impact on the mental health of men and women. Men reported significantly more combat experiences than women.
- Compared to men, women reported significantly more interpersonal stressors during deployment, especially frequent incidents of sexual harassment and less social support from supervisors and peers.
- Although men and women reported similar levels of PTSD and depression, women reported significantly higher levels of anxiety.
- Lower levels of social support during deployment represented a stronger risk factor for depression and anxiety among women compared to men.
- Although only 10% of the men in this sample reported sexual harassment, higher levels of sexual harassment represented a stronger risk factor for depression and anxiety among men compared to women.

**Implications for Programs:**

- Programs could develop modules in their Service member education curricula about the importance of social support from peers during deployment. Programs could encourage Service members to dedicate time and energy to these relationships, recognizing that such peer support can give strength during difficult times.
- Programs could develop educational materials about the deleterious effects of sexual harassment, encouraging affected personnel to seek support if indicated.
- Programs could consider providing specific supportive services to the families of female Service members during deployment; for example, existing programming could be tailored to address the unique issues faced by female Service members (e.g., anxiety, interpersonal stressors) and their families.

**Implications for Policies:**

- Policies could continue funding for sexual harassment prevention activities as well for as a range of supports for people who have experienced such harassment.
- Policies could recommend systematic literature reviews, identifying protective and risk factors associated with Service members affected by sexual harassment.

**Avenues for Future Research:**

- Future research could replicate this study with OIF/OEF Veterans.
- Future research could explore how family/relationship disruptions translate into challenges in post deployment mental health for women.
- Future research could explore how men's experiences of sexual harassment are qualitatively different than those of women.
Gulf War I Veterans from across the U. S. were identified through the Defense Manpower Data Center and the VA Gulf War Health Registry (response rate: 66%). Participants completed self-report questionnaires containing measures of mission stressors (combat experiences, aftermath of battle, perceived threat, difficult living and working environment), interpersonal stressors (concerns about family/relationship disruptions, lack of deployment social support, sexual harassment), and mental health outcomes (depression, anxiety, PTSD). Researchers used independent sample t-tests and hierarchical regression analyses to examine study outcomes.

317 Gulf War I Veterans participated. Demographics: Gender: 74% male; 26% female. Age: Not specified; Race/Ethnicity: Not specified; Branch: Army, Navy, Air Force, Marines, and Coast Guard (percentages not specified); Component: Active Duty, Reserve, and National Guard (percentages not specified); Rank: Not specified.

Results are based on retrospective accounts collected approximately 10 years after deployment to the 1990–1991 Gulf War. Hence, the findings may be biased given issues related to memory. Data are based on self-reports, which are subject to bias. Several key demographic variables were missing (e.g., age, race/ethnicity, military branch) which limits the ability to understand the sample.

---

### Assessing Research that Works

#### Research Design and Sample

<table>
<thead>
<tr>
<th>Quality Rating:</th>
<th>Excellent (★★★)</th>
<th>Appropriate (★★)</th>
<th>Limited (★)</th>
<th>Questionable (★)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The design of the study (e.g., research plan, sample, recruitment) used to address the research question was...</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

#### Research Methods

<table>
<thead>
<tr>
<th>Quality Rating:</th>
<th>Excellent (★★★)</th>
<th>Appropriate (★★)</th>
<th>Limited (★)</th>
<th>Questionable (★)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The research methods (e.g., measurement, analysis) used to answer the research question were...</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

#### Limitations

<table>
<thead>
<tr>
<th>Quality Rating:</th>
<th>Excellent Minor Limitations (★★★)</th>
<th>Appropriate Few Limitations (★★)</th>
<th>Limited Several Limitations (★)</th>
<th>Questionable Many/Severe Limitations (★)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The limitations of this study are...</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

#### Implications

<table>
<thead>
<tr>
<th>Quality Rating:</th>
<th>Excellent (★★★)</th>
<th>Appropriate (★★)</th>
<th>Limited (★)</th>
<th>Questionable (★)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The implications of this research to programs, policies and the field, stated by the authors, are...</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

☐ Not applicable because authors do not discuss implications

---

**Overall Quality Rating:** ★★★