GENDER DIFFERENCES IN STRESS RESPONSE OF BULLYING VICTIMS
Subhan Tabba, Steven Lee, Ellie Shuo Jin, Robert Josephs, and Yvon Delville
The University of Texas at Austin

INTRODUCTION
- Male bullying victims are more likely to carry out premeditated crimes than their female counterparts.
- Epidemiologically, women tend to have higher prevalence of anxiety and depression compared to men.
- Bullied groups have diminished stress reactivity.
- Limited research has examined gender differences in anxiety and depression with respect to bullying. The present study examined gender differences in subjective and physiological stress response to an acute laboratory stressor between bullied and non-bullied subjects.

HYPOTHESES
It was hypothesized that
i. Bullied individuals will have lower cortisol and subjective stress response to an acute laboratory stressor than non-bullied counterpart
ii. Bullied individuals will self-report greater levels of anxiety and depression than non-bullied controls
iii. Female bullying victims will have a more reactive form of aggression whereas males will have a more proactive form of aggression

METHODS
- Participants were divided into four conditions based on responses to Olweus Bullying Questionnaire and gender
- Age and Condition
<table>
<thead>
<tr>
<th>Age</th>
<th>Bullied</th>
<th>Non-Bullied</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 years</td>
<td>n=22</td>
<td>n=23</td>
</tr>
<tr>
<td>12 years</td>
<td>n=22</td>
<td>n=23</td>
</tr>
</tbody>
</table>

- Procedures
  - Subjects responded to Center for Epidemiologic Studies Depression Scale (CES-D)², Beck Anxiety Inventory (BAI)³, and Risky Family Questionnaire (RFQ)⁴
  - Subjects completed the Trier Social Stress Test (TSST)⁵ in which they were instructed to deliver a speech and perform an arithmetic task in front of an impassive panel of judges. Subjects provided self-reported anxiety and stress using a visual analogue scale and cortisol samples throughout the TSST.

RESULTS
- Bullied groups tended to have a diminished cortisol response to TSST
- Non-bullied females reported significantly greater acute stress
- Non-bullied females reported significantly greater acute anxiety
- Bullied females reported significantly greater depression on Center for Epidemiologic Studies Depression Scale (CES-D)
- Bullied females reported significantly greater chronic anxiety on Beck Anxiety Inventory (BAI)
- Bullied females reported significantly greater risky family situations on the Risky Family Questionnaire (RFQ)

SUMMARY
- Results demonstrate diminished endocrine stress reactivity (trending) in the bullied group compared to the non-bullied group in response to the TSST.
- No significant differences in terms of cortisol response were observed between the four groups (gender x drug condition).
- Non-bullied female subjects reported significantly greater levels of acute stress and anxiety during the TSST; no significant difference was observed in the bullied versus non-bullied male subjects.
- In self report surveys, bullied female participants reported significantly greater depression and anxiety.
- Bully female subjects scored higher on the risky family questionnaire compared to other groups.

CONCLUSIONS
- Bullied individuals may be experiencing dysregulations of the HPA axis, such that their cortisol responses are suppressed (trending).
- The disparity found between self-reported chronic anxiety and acute anxious feelings in response to the TSST may be attributed to the fact that individuals with a bullying history may be desensitized to stressful situations.
- Risky family situations are associated with reactive aggression and in extreme cases, borderline personality disorder.

REFERENCES

ACKNOWLEDGEMENTS
A special thank you to Dr. Theresa Jones, Michael Ng, and Rehuma Tabba for their tireless support and encouragement.