INTRODUCTION

The UCLA PTSD Reaction Index (PTSD-RI; Steinberg et al., 2004) is one of the most widely-used assessment tools in the field of childhood posttraumatic stress [1-2].

The primary goal of the present study was to validate the UCLA PTSD Reaction Index for DSM-5 (RI-5), by examining its (1) reliability, (2) criterion validity, and (3) clinical utility. The following hypotheses were examined in two separate studies.

Hypothesis #1: In Study 1 & 2, the RI-5 would show high reliability (i.e., internal consistency) for boys and girls in both studies.

Hypothesis #2: In Study 1, the RI-5 would show evidence of criterion-referenced validity for boys and girls, such that RI-5 subscales and its total scale score would positively correlate with measures indicative of psychopathology (e.g., depression), and inversely correlate with measures of adaptive functioning (e.g., prosocial behaviors).

Hypothesis #3: In Study 2, the RI-5 would demonstrate discriminant and clinical utility via ROC analyses, such that total scale scores would discriminate participants who met PTSD criteria, and a cutoff score would be obtained to allow clinicians to identify children who are at high risk for PTSD.

METHODS

Study 1: Participants & Procedure. A sample of 486 youth (M_age = 13.32; 54% girls; 37% White; 9% other; 2% Latino) exposed to potentially traumatic events were recruited through a practice-research network partnership, and completed the following measures of psychological functioning:

Measures

RI-5 [3] is an assessment tool, derived from the DSM-IV version of the measure [4], and designed to identify exposure to traumatic events and assess DSM-5 PTSD symptoms in children and adolescents aged 6 to 18.

Short Mood & Feelings Questionnaire (SMFQ) [6]. The SMQ is a behavioral screening questionnaire for children/adolescents, comprised of five scales: emotional symptoms, conduct problems, hyperactive/inattentive, peer relationship problems, and prosocial behaviors; as well as an overall impact domain.

Strengths & Difficulties Questionnaire (SDQ) [5]. The SDQ is a parent-report behavioral screening questionnaire for children and adolescents.

Study 2: Participants & Procedure. A treatment-seeking sample of 41 youth (M_age = 12.44 years; 59% girls; 39% Latino; 27% Black; 19% White; 15% Biracial), completed the RI-5 and a “gold standard” structured interview, the CAPS-CA-5; Pynoos et al., 2015), as part of their evaluation at a trauma clinic.

Clinician-Administered PTSD Scale for DSM-5—Child/Adolescent Version (CAPS-CA-5) [7]. The CAPS-CA-5 is a clinician-administered PTSD scale based upon DSM-5 criteria for children and adolescents ages 7+.

RESULTS

Study 1 & 2: Reliability:

- All RI-5 subscales’ internal consistencies, with the exception of Subscale C, were found to be acceptable or better [9].
- The RI-5 Total Scale Score exhibited “excellent” internal consistency across studies.
- The only sex difference was with regard to Subscale C, which was acceptable for girls, but poor for boys.

Table 1. Internal Consistencies of RI-5 Subscales and Total Scale Score.

<table>
<thead>
<tr>
<th>RI-5 Indicator</th>
<th>Study 1</th>
<th>Study 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subscale A</td>
<td>.83</td>
<td>.95</td>
</tr>
<tr>
<td>Subscale B</td>
<td>.54</td>
<td>.74</td>
</tr>
<tr>
<td>Subscale C</td>
<td>.88</td>
<td>.79</td>
</tr>
<tr>
<td>Subscale D</td>
<td>.73</td>
<td>.76</td>
</tr>
<tr>
<td>Diss. Subtype</td>
<td>.87</td>
<td>.87</td>
</tr>
<tr>
<td>Total Scale</td>
<td>.93</td>
<td>.94</td>
</tr>
</tbody>
</table>

Note: a = Cronbach’s alpha; Subscale B: intrusion symptoms; Subscale C: avoidance symptoms; Subscale D: negative alterations in cognitions and mood; Subscale E: arousal and reactivity symptoms; Diss. = Dissociative.

Study 1: Criterion Validity:

- RI-5 Total Scale Scores were correlated with depression scores (r = .68, p < .001).
- For girls:
  - All RI-5 subscales (rs = .40-55, p < .01) and RI-5 Total Scale Score (r = .56, p < .01) were positively related to SDQ Emotional Problems.
  - Subscale E score (r = .34, p < .05) and Dissociative Subtype score (r = .34, p < .05) were correlated with SDQ Conduct Problems.
  - Dissociative Subtype score was positively related to SDQ Peer Problems (r = .35, p < .05).
- For boys:
  - Subscale B (r = .35, p < .05) and E score (r = .34, p < .05) were positively correlated with SDQ Emotional Problems, and Subscale E score positively correlated with SDQ Hyperactivity (r = .34, p < .05) and SDQ Total Problems Score (r = .35, p < .05).

Study 2: Clinical Utility:

- ROC analyses indicated that all RI-5 subscales had “fair” or better accuracy (i.e., maximized sensitivity and specificity) [10] discriminating participants with PTSD (AUC = .72-.94).
- The RI-5 Total Scale Score exhibited “excellent” diagnostic accuracy (AUC = .94).

Table 2. AUCs from ROC Analyses.

<table>
<thead>
<tr>
<th>RI-5 Indicator</th>
<th>AUC</th>
<th>SE</th>
<th>p</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subscale B</td>
<td>.92</td>
<td>.04</td>
<td>&lt;.001</td>
<td>84.10</td>
</tr>
<tr>
<td>Subscale C</td>
<td>.87</td>
<td>.06</td>
<td>&lt;.001</td>
<td>76.98</td>
</tr>
<tr>
<td>Subscale D</td>
<td>.90</td>
<td>.05</td>
<td>&lt;.001</td>
<td>81.99</td>
</tr>
<tr>
<td>Subscale E</td>
<td>.94</td>
<td>.04</td>
<td>&lt;.001</td>
<td>86.00</td>
</tr>
<tr>
<td>Diss. Subtype</td>
<td>.72</td>
<td>.09</td>
<td>&lt;.03</td>
<td>55.89</td>
</tr>
<tr>
<td>Total Scale</td>
<td>.94</td>
<td>.03</td>
<td>&lt;.01</td>
<td>88.10</td>
</tr>
</tbody>
</table>

CONCLUSIONS

The present study examined the psychometric properties and clinical utility of the RI-5, a newly developed measure to assess DSM-5 PTSD criteria in trauma-exposed youth. Results indicated the following conclusions:

- The RI-5 demonstrated overall excellent internal consistency.
- The RI-5 was found to exhibit criterion validity, as it positively correlated with measures of psychopathology, and was not correlated with measures of adaptive functioning in girls.
- The RI-5 discriminated children diagnosed with PTSD from other trauma-exposed children who did not meet criteria for PTSD.
- The RI-5 was demonstrated to be a clinically useful tool, as its Total Scale Score can be used to identify PTSD risk in different settings.

REFERENCES


This research was supported in part by grants SM-16008 and SM-06211 from SAMHSA (PI: Kaplow).